Access DB# 78929 (92)

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Parviz Hassanzadeh Examiner #: 77146 Date: 10/28/02
Art Unit: 1763 Phone Number 308-2050 Serial Number: 09/625,200
Mail Box and Bldg/Room Location: CP3-10E14 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Device to generate excited/ionized particles in a plasma.

Inventors (please provide full names): Heinz Steinhardt; Alexander Schwandtner; Josef Mathuni.

Earliest Priority Filing Date: 7/21/00

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

discharge

A plasma source comprising:

- an electromagnetic wave generator;
- an electrical coaxial conductor;
- an inlet for introducing gas into spot between the coaxial conductor;

wherein the inner conductor is displaceable. (movable)

the Key words: remote discharge (plasma) source (generator)

* Please use STN data base.

****

STAFF USE ONLY

Searcher: Carol Wong
Searcher Phone #: 305-9783
Searcher Location: PK2-4833
Date Searcher Picked Up: 10-31
Date Completed: 11-4
Searcher Prep & Review Time: 75
Clerical Prep Time:
Online Time:

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#)
Bibliographic /
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN /
Dialog
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify) /

PTO-1590 (8-01)

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File 344:Chinese Patents Abs Aug 1985-2002/Oct
        (c) 2002 European Patent Office
File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)
        (c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2002/UD,UM &UP=200270
        (c) 2002  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
        (c) 2002 INPI.  All rts. reserv.

Set      Items   Description
S1      931718   DISCHARG???? ? OR PLASMA
S2       76331   S1(3N)(GENERAT? OR SOURCE? ? OR PRODUC?????? ? OR PROD? ? -
             OR CREAT???? ?)
S3       65377   S1(3N)(FORM?? ? OR FORMING? ? OR FORMAT???? ? OR MAKE? ? OR
              MADE? ? OR MAKING? ? OR SYNTHESI? OR PREPAR?????? ? OR PREP?
             ? OR PRPN?)
S4     1088456   TUBE? ? OR COND OR CONDUCTER? ? OR CONDUCTOR? ?
S5      116063   S4(3N)(INNER? OR INSIDE? OR CENTRAL? OR CENTER? OR CENTRE?
             OR INTERIOR? OR INTERNAL? OR INMOST? OR MIDDLE?)
S6       29155   S4(3N)(DISPLAC? OR MOVAB? OR MOVE? ? OR MOVING OR SHIFT????
              ? OR SLID??? ? OR MOBIL?????? ? OR REPOSITION? OR RE()POSITI-
             ON???? ? OR REARRANG?)
S7       59335   S4(3N)(RE()ARRANG?????? ? OR ADJUST? OR REPLAC? OR ROTAT??-
             ???? ? OR REMOV? OR INTERCHANG? OR EXCHANG? OR SWITCH? OR INT-
             ER()CHANG?)
S8        4390   *deleted*  S4(3N)(WITHDRAW? OR 'WITH'()DRAW???? ? OR EXTRA-
             CT???? ?)
S9       37477   (CO()AXIAL? OR COAXIAL? OR MULTIPLE? ? OR TWO OR PAIR?? ? -
             OR MANY OR MULTI OR SEVERAL OR NUMEROUS OR PLURAL? OR NUMBER)-
             (1W)S4
S10      16807   (SECOND OR DOUBLE OR DUAL OR TWIN)(1W)S4
S11       2375   S2:S3 AND S5
S12        762   S2:S3 AND S6:S8
S13        181   S11 AND S12
S14         20   S13 AND S9:S10
S15         20   S14 NOT BLOOD
S16         19   S15 NOT FLUORESC?(2N)LAMP?
S17      41294   IC='H01J-037'
S18       2745   IC='H01J-037/32':IC='H01J-037/56'
S19       2740   IC='H01J-037/32':IC='H01J-037/36'
S20      17808   IC='H05H-001'
S21       7974   IC='H05H-001/46'
S22       3168   MC='L03-H04D'
S23       9067   MC='U11-C09C'
S24       3827   MC='V05-F05C'
S25       1743   MC='V05-F05C1'
S26       1449   MC='V05-F05C1A'
S27       2076   S5 AND S6:S7 AND S9:S10
S28          6   S27 AND S17:S26
S29         22   S16 OR S28
?t29/9/a11

 29/9/1     (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
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05851678    **Image available**
ELECTRODELESS DISCHARGE LAMP UNIT AND LIQUID TREATMENT EQUIPMENT

PUB. NO.:       10-134778  [JP 10134778  A]
PUBLISHED:      May 22, 1998 (19980522)
INVENTOR(s):    INOUE AKIHIRO
                KAWAZURU SHIGEHISA
                ONISHI HIROSHI
                NAKAYAMA YOSHIO
                ISHIMITSU MAKIO
APPLICANT(s):   TOSHIBA LIGHTING & TECHNOL CORP [461465] (A Japanese Company
                or Corporation), JP (Japan)
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TOSHIBA COR[000307] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-289952 [JP 96289952]
FILED: October 31, 1996 (19961031)
INTL CLASS: [6] H01J-065/04; A61L-002/10; C02F-001/32; F21S-001/00; H05B-041/24
JAPIO CLASS: 43.4 (ELECTRIC POWER -- Applications); 13.1 (INORGANIC CHEMISTRY -- Processing Operations); 28.2 (SANITATION -- Medical)

ABSTRACT

PROBLEM TO BE SOLVED: To support a discharge tube with a simple structure.

SOLUTION: A **double tube** structured **discharge** tube 11 **formed** by an outer **tube** 11a and an **inner tube** 11b is supported by flanges 13b1 and 13b2 in which a tip end of the **inner tube** 11b longer than the outer tube 11a constitutes an envelope 13 and is housed in the envelope 13 closely shielded so that flow water 100 invades. Thereby, since the discharge **tube** 11 is never **moved** mechanically stabilized in the envelope 13, the discharge tube 11 is never damaged, and flow water does not come into direct contact with the discharge tube 11. When a high-frequency current is supplied to an excitation coil 12 wound around an outer periphery of the outer tube 11a through the lead wire 15 and a discharge tube is lit, a tube wall of the discharge tube 11 is held at approximately 40 deg.C due to a heat **generated** from the **discharge** tube 11 and a heat effect of the envelope 13, ultra-violet rays are effectively irradiated from mercury in the discharge tube 11, and a sufficient quantity of ultra-violet rays are irradiated in flow water 100.

29/9/2 (Item 2 from file: 347)

05183126 **Image available**
HOT CATHODE PLANE EMISSION LIGHTING SYSTEM

PUB. NO.: 08-138626 [JP 8138626 A]
PUBLISHED: May 31, 1996 (19960531)
INVENTOR(s): AMANO YOSHIFUMI
APPLICANT(s): T T T KK [000000] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-308068 [JP 94308068]
FILED: November 07, 1994 (19941107)
INTL CLASS: [6] H01J-061/92
JAPIO CLASS: 43.4 (ELECTRIC POWER -- Applications); 44.9 (COMMUNICATION -- Other)
JAPIO KEYWORD: R011 (LIQUID CRYSTALS)

ABSTRACT

PURPOSE: To provide a thin lighting system having excellent light-emitting efficiency by fitting **plural** thinner **tubes** than a hot cathode discharge tube to the discharge tube in an approximately right angle direction to the tube axis, setting electrodes at the tips of the thin tubes, and applying high potential voltage to them.

CONSTITUTION: A main discharge tube 1 is equipped with hot cathodes 3 at both ends thereof so as to **form** a hot cathode **discharge** tube. **Plural** sub- **tubes** 2 are provided so as to hold discharge spaces in common from the side face of the main discharge tube 1, have smaller or thinner outside diameters than that of the main discharge **tube** 1, have their **inner** wall faces to which fluorescent substance is applied, and be connected to the discharge space of the main discharge tube 1. At the tips of the sub-discharge **tubes** 2, discharge **extract** electrodes 4 are arranged at the respective sub-discharge tubes 2. When the potential of the electrodes 4 is made higher than the positive column potential of the main discharge tube 1, the electrons of positive columns are extracted to the sub-discharge tubes 2 so as to **produce discharge** . Thereby, the positive columns are **produced inside** the sub- **discharge tubes** 2, so that a

fluorescent screen applied to the wall faces emits light.

29/9/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

02952384 **Image available**
CENTRIPETAL TYPE BLOWER

PUB. NO.: 01-249984 [JP 1249984 A]
PUBLISHED: October 05, 1989 (19891005)
INVENTOR(s): MIYAHARA SHINJIRO
KONDO RYUTA
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 63-076765 [JP 8876765]
FILED: March 30, 1988 (19880330)
INTL CLASS: [4] F04D-017/02; F04D-029/56
JAPIO CLASS: 24.1 (CHEMICAL ENGINEERING -- Fluid Transportation)
JOURNAL: Section: M, Section No. 914, Vol. 13, No. 593, Pg. 98, December 27, 1989 (19891227)

ABSTRACT

PURPOSE: To control the direction of **discharge** by **forming** an intake path between a sub-plate having a bellmouth extending a cylindrical expansible control tube to the downstream side and a main plate.
CONSTITUTION: An intake path 15 is formed between a main plate 11 and a sub-plate 14 having a bellmouth 13 extending a cylindrical control tube 12 to the downstream side. An impeller 18 embedded in the outer periphery of the hub with a plurality of blades 17 concentrically with the bellmouth 13 is disposed in the intake path 15. Also, the control tube 12 is constructed to have **double tubes**, **inner** and outer **tubes** 19, 20, while the outer **tube** 20 **slides** on the outer periphery of the **inner tube** 19 along a rotary shaft 21 of the impeller 18. The air flow is discharged as a concentrated flow and a dispersed one respectively when the length of the control tube 12 is the longest one and the shortest one.

29/9/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

01990891 **Image available**
OUTPUT CONTROLLING METHOD OF CARBON DIOXIDE GAS LASER

PUB. NO.: 61-204991 [JP 61204991 A]
PUBLISHED: September 11, 1986 (19860911)
INVENTOR(s): NISHIMURA HIDEKAZU
YANO MAKOTO
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-044847 [JP 8544847]
FILED: March 08, 1985 (19850308)
INTL CLASS: [4] H01S-003/097
JAPIO CLASS: 42.2 (ELECTRONICS -- Solid State Components)
JAPIO KEYWORD: R002 (LASERS)
JOURNAL: Section: E, Section No. 477, Vol. 11, No. 36, Pg. 118, February 03, 1987 (19870203)

ABSTRACT

PURPOSE: To pulsate the output by a small-capacity pulse power **source**, by limiting a **discharge** region, which is the object of pulse control, to one place, so that the capacity is smaller than the case where the total **discharge** region is **made** to be the object of control.

CONSTITUTION: An output mirror 4 and a total reflection mirror 5 are attached to both ends of three discharge tubes 1, 2 and 3. Each discharge

tube has anodes 6, 7 and [redacted] and cathode 9, 10 and 10 at both ends. Power is supplied steadily to the discharge tubes 1 and 2 from a DC power **source** 12, and **discharge** is **generated** in the **inside** . However, the **tubes** are **adjusted** so that are not oscillated by the discharge only in the **two** discharge **tubes** . Power is supplied to the discharge tube 3 from a pulse power **source** 13, and the **discharge** is pulsated. When the discharge tube 3 is discharged, all the discharge tubes 1, 2 and 3 are **discharged** , and oscillation is **generated** . When the **discharge** in the discharge tube 3 is stopped, the oscillation is not generated only by the remaining **two** discharge **tubes** . Therefore, the laser output can be pulsated by controlling only the discharge tube 3 by pulses.

29/9/5 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013564346 **Image available**
WPI Acc No: 2001-048553/200106
XRPX Acc No: N01-037207
SHF plasma-chemical electrical discharge heating reactor
Patent Assignee: DIGAZKRON STOCK CO (DIGA-R)
Inventor: LEONTEV I A; LYSOV G V
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
RU 2149521	C1	20000520	RU 99102196	A	19990202	200106	B

Priority Applications (No Type Date): RU 99102196 A 19990202
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
RU 2149521	C1			H05B-007/18	

Abstract (Basic): RU 2149521 C1
NOVELTY - SHF plasma-chemical reactor includes metal discharge chamber, unit to input SHF energy into chamber connected to upper bottom of **discharge** chamber and **made** in the form of two **coaxial** metal **tubes** . SHF **adjustment** element is located **inside** **internal** **tube** . Wall of external tube of input unit has one or several windows to which rectangular waveguides are linked. Lower bottom of discharge chamber carries platform to mount machined part for movement relative to bottom towards axis of chamber. Mobile pin electrode is positioned in side wall of discharge chamber. Nozzles for injection of working gas are located in side wall of discharge chamber close to its lower bottom and lower bottom has holes for egress of gas. According to one of versions of proposed reactor dielectric ring is placed between upper bottom of discharge chamber and input unit, in agreement with another version discharge chamber has diameter considerably exceeding diameter of external tube of input unit and is linked to it by means of adapter composed of metal body and metal enclosure of conical shape and dielectric ring is installed in plane of upper bottom of discharge chamber in clearance between them.
USE - Physics.
ADVANTAGE - Increased operational reliability, raised SHF power and productivity. 4 cl, 2 dwg
pp; 0 DwgNo 1/1
Title Terms: SHF; PLASMA; CHEMICAL; ELECTRIC; DISCHARGE; HEAT; REACTOR
Derwent Class: V05; X14; X25
International Patent Class (Main): H05B-007/18
International Patent Class (Additional): **H05H-001/24** ; **H05H-001/30**
File Segment: EPI
Manual Codes (EPI/S-X): **V05-F05C** ; X14-F; X25-B03B

29/9/6 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012600714 **Image available**
WPI Acc No: 1999-406818/199935
XRPX Acc No: N99-303463

Plasma torch with adjustable injector for gas analysis

Patent Assignee: AIR LIQUIDE SA (AIRL)
Inventor: CARRE M; COFFRE E; TRASSY C

Number of Countries: 031 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 930810	A1	19990721	EP 98402992	A	19981130	199935	B
FR 2773299	A1	19990702	FR 9716619	A	19971229	199939	
FR 2773300	A1	19990702	FR 9716620	A	19971229	199939	
JP 11248632	A	19990917	JP 98370101	A	19981225	199949	
CN 1235274	A	19991117	CN 98126221	A	19981229	200013	
SG 71892	A1	20000418	SG 985896	A	19981222	200027	
KR 99063580	A	19990726	KR 9863916	A	19981228	200043	
TW 412636	A	20001121	TW 98120614	A	19981211	200121	
US 6236012	B1	20010522	US 98221163	A	19981228	200130	

Priority Applications (No Type Date): FR 9716620 A 19971229; FR 9716619 A 19971229
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 930810	A1	F	14	H05H-001/30	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
FR 2773299	A1			H05H-001/34	
FR 2773300	A1			H05H-001/34	
JP 11248632	A		9	G01N-021/73	
CN 1235274	A			G01N-021/00	
SG 71892	A1			G01N-021/73	
KR 99063580	A			B23K-010/00	
TW 412636	A			G01N-021/61	
US 6236012	B1			B23K-009/00	

Abstract (Basic): EP 930810 A1

NOVELTY - The torch (10) has a tubular central injector (12) within a double sleeve (28,30) whose outer member (30) extends through a high-frequency (5-100 MHz) coil (16). The gas (26) for analysis is delivered by the injector, while the annular passage (32) of the double sleeve supplies e.g. argon, which in the coil's field **forms** the **plasma** (P).

DETAILED DESCRIPTION - The Lorentz effect produces a flow (F1) towards the injector in the central zone into which the subject gas is injected (F2), directing the latter towards the plasma periphery. Opt., the subject gas flow is centered in a flow of guidance gas supplied via an additional **coaxial tube** . Impurities in the subject gas are assessed by a photoelectric detector (34) and associated processor (36) on the basis of the wavelength of the radiation produced. The effective diameter of the injector is made variable by introducing an axially **mobile inner tube** in the gas passage (26), to carry the gas flow. A pneumatic actuator nearer the gas source, by lowering the end of the **inner tube** , increases the effective flow diameter from that of the inner to that of the outer tube (20). By adding further concentric tubes diameter control can be further elaborated. Analysis is facilitated by selecting the appropriate diameter for the particular subject gas.

USE - Checking impurities in gases.

ADVANTAGE - A direct method, permitting continuous monitoring instead of relying on discrete samples.

DESCRIPTION OF DRAWING(S) - The drawing represents the torch schematically in axial section.

Injector (12)
Coil (16)
HF generator (18)
Double sleeve (28,30)
Plasma gas channel (32)
Photoelectric detector (34)

Processor (34)
pp; 14 DwgNo 1/6
Title Terms: PLASMA; TORCH; ADJUST; INJECTOR; GAS; ANALYSE
Derwent Class: P55; X14; X24
International Patent Class (Main): B23K-009/00; B23K-010/00; G01N-021/00; G01N-021/61; G01N-021/73; **H05H-001/30** ; **H05H-001/34**
International Patent Class (Additional): G01N-033/00
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): X14-F03; X24-D05

29/9/7 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011275635 **Image available**
WPI Acc No: 1997-253538/199723
XRAM Acc No: C97-081485
XRPX Acc No: N97-209809

Viscous resin injection gun for waterproof construction - connects discharge opening of tube detachably inserted in filling cylinder to suction opening of gun with peripherally fitted fluid tight packing

Patent Assignee: NOGUCHI KOSAN KK (NOGU-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9085145	A	19970331	JP 9687350	A	19960315	199723	B

Priority Applications (No Type Date): JP 95202884 A 19950717
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9085145	A		19	B05C-005/00	

Abstract (Basic): JP 9085145 A

The gun consists of a filling cylinder which detachably stores a resin filling tube (150) provided with a discharge opening of screw cap type. The tube is detachably inserted from one end opening of the filling cylinder. An integrating nozzle member (171) is formed in the tube for being integrated with the inner surface of a suction opening formed at the lower end of an injection operation cylinder formed in the cap of the filling cylinder. A piston is arranged inside the injection operation cylinder and reciprocated by a lever rockably provided for the cap of the filling cylinder. The tube has a tube body (151) **formed** with a **discharge** side member. A couple of sheet-like tube pieces (160,161) are provided **inside** the **tube** body. Each of the tube pieces has a square base (160a,161a) attached with a semicircular flange piece (160b,161b) at the upper edge.

The flange pieces form a complete flange when the side and bottom edges of the **two tube** pieces are integrated. The discharge side member of the tube body has a sealing sheet material (170) which has a shape adjusting to the flange formed by the integration of the flange pieces in the tube pieces. The nozzle member of the tube body is integrated to the central part of the sealing sheet material which is integrally joined along the periphery to the discharge side member of the tube body and the flange of the tube pieces. The nozzle member of the tube body is fixed to the discharge opening by screwing. The gap between the inner peripheral surface of the suction opening and the surroundings of the discharge opening is sealed fluid tight through a packing.

ADVANTAGE - Prevents leakage of resin by airtight connection between suction opening of cylinder cap and discharge opening of tube body. Facilitates continuous work by **exchanging tubes** . Improves handling of packing and tube. Eliminates need for resin flange. Decreases number of parts. Improves work efficiency of mounting. Extends generality of tube. Makes tube compact by crushing after use. Facilitates use of resin completely without wastage. Decreases amount of rubbish. Eliminates complex cleaning work. Reduces cost of equipment, materials and maintenance. Eliminates dead space in filling

cylinder of gun. Simp[redacted]fies manufacturing process. [redacted]
Dwg.3/22
Title Terms: VISCOSITY; RESIN; INJECTION; GUN; WATERPROOF; CONSTRUCTION; CONNECT; DISCHARGE; OPEN; TUBE; DETACH; INSERT; FILL; CYLINDER; SUCTION; OPEN; GUN; PERIPHERAL; FIT; FLUID; TIGHT; PACK
Derwent Class: A93; P42; Q32; Q45
International Patent Class (Main): B05C-005/00
International Patent Class (Additional): B65D-035/02; E04F-021/165
File Segment: CPI; EngPI
Manual Codes (CPI/A-N): A12-R08
Polymer Indexing (PS):
<01>
001 018; P0000
002 018; ND05; N9999 N7012; N9999 N6360 N6337; Q9999 Q9007; B9999 B3509 B3485 B3372; B9999 B4706-R B4568; K9416; N9999 N5856; B9999 B4864 B4853 B4740; J9999 J2904; J9999 J2915-R
<02>
001 018; G0022-R D01 D51 D53; H0000; H0011-R
002 018; ND01; Q9999 Q8413 Q8399 Q8366; J9999 J2904

29/9/8 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011227705 **Image available**
WPI Acc No: 1997-205608/199719
XRPX Acc No: N97-169680
Dielectric barrier discharge lamp - has motion preventing component positioned at ends of inner electrode to maintain axial position of inner electrode w.r.t. inner tube
Patent Assignee: USHIO DENKI KK (USHE); USHIO INC (USHE)
Inventor: AIURA Y; HIROSE K; HISHINUMA N; IGARASHI T; KASAGI K; MATSUNO H; TAKEMOTO F
Number of Countries: 007 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 767484	A1	19970409	EP 96115854	A	19961002	199719	B
JP 9097596	A	19970408	JP 95276194	A	19951002	199724	
KR 97023605	A	19970530	KR 9643445	A	19961001	199823	
US 5757132	A	19980526	US 96725039	A	19961002	199828	
TW 345676	A	19981121	TW 96110742	A	19960903	199916	
JP 3082638	B2	20000828	JP 95276194	A	19951002	200044	

Priority Applications (No Type Date): JP 95276194 A 19951002
Cited Patents: 2.Jnl.Ref; EP 254111; EP 312732; JP 1117266; JP 61206132
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 767484	A1	E	7	H01J-065/00	
Designated States (Regional): DE FR GB					
JP 9097596	A		5	H01J-065/00	
KR 97023605	A			H01J-065/00	
US 5757132	A			H01J-061/067	
TW 345676	A			H01J-061/04	
JP 3082638	B2		5	H01J-065/00	Previous Publ. patent JP 9097596

Abstract (Basic): EP 767484 A

The discharge tube has a cylindrical, **double tube** arrangement with an outer tube coaxially arranged about an **inner tube** (2) with a discharge space (4) between them. An outer electrode (6) is placed on the outer tube outer surface, and an inner electrode (5) on the inner surface of the **inner tube** .

A **discharge** gas **forms** excimer molecules using a dielectric barrier discharge filling in the space. The inner electrode is tubular metal. A motion preventing component (15 & 16) is placed at the ends of the inner electrode to maintain an axial position of this electrode w.r.t. the **inner tube** . The tubular metal component forming the inner electrode has a gap which extends axially along its length.

USE/ADVANTAGE - E[redacted] providing ultraviolet light so[redacted]e for photochemical reaction using light radiated from excimer molecules which are **formed** by dielectric barrier **discharge** . Prevents inner electrode from **moving** in **inner tube** and relative positional relationship between inner electrode and discharge vessel from being destroyed, even if dielectric barrier discharge lamp is repeatedly turned on and off and inner electrode repeatedly expands and contracts as result.

Dwg.1/5

Title Terms: DIELECTRIC; BARRIER; DISCHARGE; LAMP; MOTION; PREVENT; COMPONENT; POSITION; END; INNER; ELECTRODE; MAINTAIN; AXIS; POSITION; INNER; ELECTRODE; INNER; TUBE
Derwent Class: X26
International Patent Class (Main): H01J-061/04; H01J-061/067; H01J-065/00
File Segment: EPI
Manual Codes (EPI/S-X): X26-A01C; X26-A02B

29/9/9 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

011152707 **Image available**
WPI Acc No: 1997-130631/199712
XRPX Acc No: N97-107929

Rapid method of fitting of tubes in tube sheets - employs explosive cartridges interacting with pulsed current generator

Patent Assignee: ELECTROHYDRAULICS DES CONSTR BUR (ELEC-R)
Inventor: IVANOV A G G; KURACH A M; VILSKII G B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
SU 728264	A1	19960627	SU 2648046	A	19780724	199712	B

Priority Applications (No Type Date): SU 2648046 A 19780724
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 728264	A1		3	B21D-026/10	

Abstract (Basic): SU 728264 A

A set up ~~for installation~~ of tubes in tube sheets, employs a pulsed current generator (PCG) interacting with electroexplosive cartridges, pre-fitted in the tube sheet. On **discharge** of the pulse **generator** (1) in series-connected electrodes (3), the current pulse passes through the conductive portions of the explosive cartridges (7) **inside** the heating **tubes** fitted in the tube sheet (8).

USE/ADVANTAGE - This expands tube ends with optimised distribution of deforming forces, permits simultaneous fitting of **several tubes** in heat **exchangers** and increases productivity of process. Bul. 18/27.6.96

Dwg.1/2

Title Terms: RAPID; METHOD; FIT; TUBE; TUBE; SHEET; EMPLOY; EXPLOSIVE; CARTRIDGE; INTERACT; PULSE; CURRENT; GENERATOR
Derwent Class: P52
International Patent Class (Main): B21D-026/10
File Segment: EngPI

29/9/10 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

010369645 **Image available**
WPI Acc No: 1995-271007/199536
XRPX Acc No: N95-208537

Fluid dispenser for public house, commercial food preparation, industrial process - has two tubes **about which two chambers of predetermined capacity** rotate , **one** tube **connected to supply reservoir and other**

forming discharge ve[redacted] actuated by trigger which also [redacted]tates chambers
Patent Assignee: SOMERFIELD A D (SOME-I)
Inventor: SOMERFIELD A D
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2286384	A	19950816	GB 9424993	A	19941212	199536	B
GB 2286384	B	19971210	GB 9424993	A	19941212	199801	

Priority Applications (No Type Date): GB 949018 A 19940506; GB 942839 A 19940215
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2286384	A		14	B67D-003/00	
GB 2286384	B			B67D-003/00	

Abstract (Basic): GB 2286384 A

The dispenser includes a number of chambers (8,9) of predetermined capacity which collectively **rotate** around **two tubes** (2,3) on the same axis. One tube (2) is connected to a supply reservoir and the other (3) **forms** the **discharge** vent (25). Each tube has a single port (5,6) in its side wall positioned so that when one port is aligned with one chamber the other port is aligned with an other chamber.

A trigger (15) having a rack acting on a cog (17) is interlocked with the rotating elements of the dispenser and acts on either the chambers or on the **central tubes** or partly on both to rotate the chambers relative to the tubes. The **tubes** are prevented from **rotating** with each other if there is insufficient liquid available to recharge the dispenser.

USE/ADVANTAGE - Any accurate delivery of small quantities of fluid is required. Rapid filling and discharging. Easily cleaned.

Dwg.1A/8

Abstract (Equivalent): GB 2286384 B

The dispenser includes a number of chambers (8,9) of predetermined capacity which collectively **rotate** around **two tubes** (2,3) on the same axis. One tube (2) is connected to a supply reservoir and the other (3) **forms** the **discharge** vent (25). Each tube has a single port (5,6) in its side wall positioned so that when one port is aligned with one chamber the other port is aligned with an other chamber.

A trigger (15) having a rack acting on a cog (17) is interlocked with the rotating elements of the dispenser and acts on either the chambers or on the **central tubes** or partly on both to rotate the chambers relative to the tubes. The **tubes** are prevented from **rotating** with each other if there is insufficient liquid available to recharge the dispenser.

USE/ADVANTAGE - Any accurate delivery of small quantities of fluid is required. Rapid filling and discharging. Easily cleaned.

Dwg.1

Title Terms: FLUID; DISPENSE; PUBLIC; HOUSE; COMMERCIAL; FOOD; PREPARATION; INDUSTRIAL; PROCESS; TWO; TUBE; TWO; CHAMBER; PREDETERMINED; CAPACITY; ROTATING; ONE; TUBE; CONNECT; SUPPLY; RESERVOIR; FORMING; DISCHARGE; VENT ; ACTUATE; TRIGGER; ROTATING; CHAMBER
Derwent Class: Q39; S02
International Patent Class (Main): B67D-003/00
International Patent Class (Additional): G01F-011/22
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): S02-C04B

29/9/11 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009871705 **Image available**
WPI Acc No: 1994-151618/199418
XRPX Acc No: N94-118939
Pre-ioniser appts. for laser for medical or manufacturing applications - includes tube with one capacitor plate inside and one outside

respectively and with integral bushings at one end
Patent Assignee: CYMER INC (CYME-N); CYMER LASER TECHNOLOGIES (CYME-N)
Inventor: LARSON D G
Number of Countries: 020 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9409536	A1	19940428	WO 93US9491	A	19931005	199418 B
US 5337330	A	19940809	US 92958922	A	19921009	199431
EP 664057	A1	19950726	EP 93923248	A	19931005	199534
			WO 93US9491	A	19931005	
JP 8502145	W	19960305	WO 93US9491	A	19931005	199644
			JP 94510089	A	19931005	
EP 664057	B1	19980506	EP 93923248	A	19931005	199822
			WO 93US9491	A	19931005	
DE 69318417	E	19980610	DE 618417	A	19931005	199829
			EP 93923248	A	19931005	
			WO 93US9491	A	19931005	
SG 48818	A1	19980518	SG 961985	A	19931005	199834
JP 2980985	B2	19991122	WO 93US9491	A	19931005	200001
			JP 94510089	A	19931005	

Priority Applications (No Type Date): US 92958922 A 19921009
Cited Patents: 00 42699300; 00 53275100; 30 958200; 9214285
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9409536	A1	E	43	H01S-003/038	
Designated States (National): CA JP					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
JP 2980985	B2		6	H01S-003/038	Previous Publ. patent JP 8502145 Based on patent WO 9409536
US 5337330	A		10	H01S-003/097	
EP 664057	A1	E	1	H01S-003/038	Based on patent WO 9409536
Designated States (Regional): DE FR GB IT					
JP 8502145	W		29	H01S-003/038	Based on patent WO 9409536
EP 664057	B1	E	10	H01S-003/038	Based on patent WO 9409536
Designated States (Regional): DE FR GB IT					
DE 69318417	E			H01S-003/038	Based on patent EP 664057 Based on patent WO 9409536
SG 48818	A1			H01S-003/038	

Abstract (Basic): WO 9409536 A

The appts. includes a tube constructed from a dielectric material with properties to support a capacitative corona discharge without dielectric breakdown. An element positioned within the tube defines a first capacitor plate whilst an element positioned outside the tube defines a second capacitor plate.

The appts. further includes bushings disposed near the end of the tube and integral with the tube. Finally a device introduces a voltage between the two capacitor plates to charge the capacitor and obtain a corona discharge from the tube.

ADVANTAGE - Operates with greater precision and reliability.

Dwg.1/5

Abstract (Equivalent): US 5337330 A

The tubes made from a dielectric material are spaced in the laser in a second direction transverse (pref. perpendicular) to the first direction. The anode, the cathode and the tubes extend through the laser in a direction transverse (pref. perpendicular) to the first and second directions. The tubes are pref. at least a 99.9% pure polycrystalline aluminum oxide ceramic with traces of other metallic elements than aluminum. Bushings made from a material homogeneous (preferably identical) to the tube material are integral with the tube near the opposite tube ends. First electrical conductors extend through the tubes. **Second** electrical **conductors** (pref. resilient) contact (pref. line contact) the external tube surfaces to define capacitors with the first conductors and the tube material.

Positioning members **movably** engage the **tube** external surfaces near the tube ends in co-operation with the resilient members

establishing three li[redacted] contacts with the tubes for po[redacted]ioning the tubes precisely in the cavity. When a voltage pulse is applied between the first **conductor inside** each **tube** and the conductors on such tube, the resultant corona discharge from the external tube surface produces ultraviolet light which pre-ionizes the gases in the cavity. This facilitates the ionisation of the gases in the cavity when an anode-cathode electrical **discharge** is **produced** .

ADVANTAGE - Greater precision of preionisation of gases in laser system.

Dwg.1,4/5

Title Terms: PRE; IONISE; APPARATUS; LASER; MEDICAL; MANUFACTURE; APPLY; TUBE; ONE; CAPACITOR; PLATE; ONE; RESPECTIVE; INTEGRAL; BUSHING; ONE; END
Derwent Class: V08
International Patent Class (Main): H01S-003/038; H01S-003/097
International Patent Class (Additional): H01S-003/0977
File Segment: EPI
Manual Codes (EPI/S-X): V08-A01B; V08-A02C; V08-A04B

29/9/12 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008776861 **Image available**
WPI Acc No: 1991-280877/199138
XRAM Acc No: C91-121767
XRPX Acc No: N91-214674

Fluid cooled welding torch - having concentric flow passages for shield gas and coolant inlet and outlet flows within torch handle and manifold

Patent Assignee: DELAWARE CAPITAL FORMATION INC (DELA-N); DELAWARE CAPITAL FO (DELA-N)
Inventor: SARKISSIAN V R
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5045665	A	19910903	US 90510355	A	19900416	199138	B
DE 4104850	A	19911017	DE 4104850	A	19910216	199143	
DE 4104850	C2	19970522	DE 4104850	A	19910216	199725	

Priority Applications (No Type Date): US 90510355 A 19900416
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4104850	C2		6	B23K-009/167	

Abstract (Basic): US 5045665 A

Appts. comprises a welding torch having a head with an axial bore and a recess for carrying an electrode, a **centre tube** coaxial with the axial bore, a passageway into the axial bore carrying shielding gas to the electrode, an **inner tube** and an outer tube forming axial flow passages with connecting passage permitting fluid flow through one tube, through the passage and along the **second tube** , whilst effecting heat **exchange** between the torch head and the fluid in order to cool the torch head during welding operation.

USE/ADVANTAGE - The appts. is useful in welding, providing a . welding torch which compactly includes a passageway for the argon shield gas, and annular internal passages for the flow and return of a water glycol coolant to the torch head before returning the mixt. back to a heat extractor unit. (5pp Dwg.No.1/5

Title Terms: FLUID; COOLING; WELD; TORCH; CONCENTRIC; FLOW; PASSAGE; SHIELD ; GAS; COOLANT; INLET; OUTLET; FLOW; TORCH; HANDLE; MANIFOLD
Derwent Class: M23; P55
International Patent Class (Main): B23K-009/167
International Patent Class (Additional): B23K-009/00; **H05H-001/00**
File Segment: CPI; EngPI
Manual Codes (CPI/A-N): M23-D01B1

29/9/13 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008548409 **Image available**
WPI Acc No: 1991-052460/199108
XRPX Acc No: N91-040672

Cooling system for electrical circuits - has tubular coil winding with inner tube conducting water

Patent Assignee: LEYBOLD AG (LEYB)
Inventor: GESCHE R D; LOCHER S; GESCHE R

Number of Countries: 008 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 413110	A	19910220	EP 90111967	A	19900623	199108	B
DE 3927324	A	19910221	DE 3927324	A	19890818	199109	
JP 3088395	A	19910412	JP 90209385	A	19900809	199121	
US 5049840	A	19910917	US 89458328	A	19891228	199140	
EP 413110	B1	19950621	EP 90111967	A	19900623	199529	
DE 59009276	G	19950727	DE 509276	A	19900623	199535	
			EP 90111967	A	19900623		

Priority Applications (No Type Date): DE 3927324 A 19890818
Cited Patents: A3...9146; DE 2553614; DE 508106; DE 961201; GB 1188494; NoSR.Pub; US 3518394
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 413110	A				
Designated States (Regional): CH DE FR GB LI NL					
EP 413110	B1	G	10	H05K-007/00	
Designated States (Regional): CH DE FR GB LI NL					
DE 59009276	G			H05K-007/00	Based on patent EP 413110

Abstract (Basic): EP 413110 A

The high power level electrical switching system has a parallel resonator circuit in which a variable capacitor is surrounded by the winchings of a coil (9) that forms an inductance. The temp. of the system is controlled by cooling into that is circulated through the winding that has a tubular form.

The coil has an **inner tube** (41) and outer tube (40), with the outer tube having an electrical connection to the circuit. Water flows through the **inner tube** and passes through an end connection (42).

ADVANTAGE - Inductive coil is configured as water cooling tube. (8pp Dwg.No. 6/7

Abstract (Equivalent): EP 413110 B

Circuit arrangement for high-frequency technology with a cooling device, wherein the cooling device is provided with **two tubes** which are disposed at least partially coaxially with respect to one another and of which at least the outer tube (40) is made from a metallic material, wherein a cooling fluid flows in a first direction in the **inner tube** (41) and the cooling fluid flows in a second direction in the space between the **inner tube** and the outer tube, and wherein the outer tube is connected to an electric potential, characterised in that the outer tube (40) is connected to earth (27) at the point at which the cooling fluid flows into or out of a component (14,10).

Dwg.1/7

Abstract (Equivalent): US 5049840 A

The cooling device is for circuit configurations in which high electrical energies are converted and specifically for electrical matching circuits with which the impedance of a plasma path is matched to a high frequency generator. One or several coils are provided with a water cooling system in such a way that the cooling water is completely separated from the electromagnetic fields through metallic material.

The coils consist of **two tubes slid** one into the other, wherein the cooling water is fed and drawn through the **internal tube** and between the **two tubes** so that it is completely within the field-free region.

ADVANTAGE - No water degradation paths are present so that conductivity of cooling water does not matter. (6pp

Title Terms: COOLING; SYSTEM; ELECTRIC; CIRCUIT; TUBE; COIL; WIND; INNER;

TUBE; CONDUCTING; WATER
Derwent Class: V04
International Patent Class (Additional): H01B-007/34; H01F-015/06; H01G-001/08; H03H-001/00; H03H-007/38; **H05H-001/46** ; H05K-007/20
File Segment: EPI
Manual Codes (EPI/S-X): V04-T03B

29/9/14 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008236678 **Image available**
WPI Acc No: 1990-123679/199016
XRPX Acc No: N90-095878
Coaxial cavity type, RF wave, plasma generating **appts. - includes elongate probe mounted in coupler and** coaxial conductor **both along longitudinal axis of coupler chamber**
Patent Assignee: UNIV MICHIGAN STATE (UNMS); UNIV MICHIGAN (UNMI)
Inventor: ASMUSSEN J
Number of Countries: 017 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4906900	A	19900306	US 89331754	A	19890403	199016	B
EP 391156	A	19901010	EP 90105450	A	19900322	199041	
CA 2010245	A	19901003				199051	
JP 2295052	A	19901205	JP 9076548	A	19900326	199104	
ES 2018464	A	19910416				199121	
CA 2010245	C	19930511	CA 2010245	A	19900216	199324	
EP 391156	B1	19950614	EP 90105450	A	19900322	199528	
DE 69020031	E	19950720	DE 620031	A	19900322	199534	
			EP 90105450	A	19900322		
ES 2018464	T3	19951016	EP 90105450	A	19900322	199547	

Priority Applications (No Type Date): US 89331754 A 19890403
Cited Patents: 1.Jnl.Ref; A3...9142; NoSR.Pub; WO 8707760; WO 8904546
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 391156	A				
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE					
EP 391156	B1	E	115	H05H-001/46	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69020031	E			H05H-001/46	Based on patent EP 391156
ES 2018464	T3			H05H-001/46	Based on patent EP 391156
CA 2010245	C			H05H-001/46	

Abstract (Basic): US 4906900 A
The **plasma generating** apparatus includes a **plasma source** employing a radiofrequency, including UHF or microwave, wave coupler device which is metallic and in the shape of a hollow cavity and which is excited in one or more modes of resonance. It optionally includes a static magnetic field around the plasma which aids in coupling radiofrequency energy at electron cyclotron resonance and aids in confining ions in the plasma in an electrically insulated chamber in the coupler devices. The elongate metallic cavity has a movable elongate coupling probe (16) mounted in line with an axis (a-a) of the cavity. The cavity has a **central coaxial conductor** (11) and a **movable** plate (12) for obtaining a mode of resonance of the radiofrequency wave in the cavity surrounding the chamber for confining the plasma (100). An end (11b) of the conductor is adjacent to the chamber and can optionally support a set of magnets (27).
USE/ADVANTAGE - For retrofitting existing vacuum sources having-small inlet ports for plasma treatment using molecular beam epitaxy (MBE). Simple and inexpensive to construct. (15pp Dwg.No.1/13
Abstract (Equivalent): EP 391156 B
A **plasma generating** apparatus including a **plasma source** employing a radio frequency, including UHF or microwave, wave coupler means (10,11,12,13) which is metallic and in the shape of a hollow

cavity (38) and which is excited in one or more modes of resonance and optionally including a static magnetic field around the plasma (100) which aids in coupling radio frequency energy at electron cyclotron resonance and aids in confining ions in the plasma in an electrically insulated chamber means (14a) in the coupler means, and wherein the chamber means (14c) has a central longitudinal axis (a-a) in common with the coupler means (10, 11, 12, 13), and is mounted in closely spaced and sealed relationship to an area of the coupler means with an opening from the chamber means at one end; gas supply means (21, 22) for providing a gas which is ionized to **form** the **plasma** (100) in the chamber means (14c), wherein the radio frequency wave applied to the coupler means (10, 11, 12, 13) **creates** and maintains the **plasma** around the central longitudinal axis (a-a) in the chamber means (14c); movable metal plate means (12) in the cavity (38) mounted in the coupler means perpendicular to the central longitudinal axis (a-a) and movable along the central longitudinal axis towards an away from the chamber means (14c); and a movable probe means (16) connected to and extending inside the coupler means (10, 11, 12, 13) for coupling the radio frequency waves to the coupler means

characterized in that

(a) said probe means (16) is elongate mounted in the coupler means (10, 11, 12, 13) in line with the central longitudinal axis (a-a) of the chamber means (14c) and coupler means with an end of the probe (16) in spaced relationship to the chamber means (14c);

(b) said plate means (12) has an opening in line with the central longitudinal axis (a-a) of the chamber means (14c) which supports the probe means (16) so that the probe means can be moved in the opening in the plate means (12) along the central longitudinal axis (a-a);

(c) a **co - axial conductor** means (11) is mounted along the longitudinal axis (a-a) of the cavity (38) such that a distal end of the conductor means (11) is adjacent to a closed end of the chamber means (14c) opposite the opening from the chamber means;

(d) support means (40, 41) for the probe means (16) is mounted on an outside portion of the coupler means (10, 11, 12, 13) including adjustable holding means (37, 39) which allows movement of the probe means (16) in line with the central longitudinal axis (a-a) of the chamber means (14c) so as to vary the spacing between the chamber means and the end (17) of the probe means (16); and

(e) rod means (35) is adjustably mounted in the support means (40, 41) and connected to the plate means (12) so as to allow the plate means (12) to be moved towards and away from the chamber means (14c), wherein movement of the plate means (12) and the probe means (16) in the coupler means (10, 11, 12, 13) achieves a selected mode of resonance and varies the resonance of the mode of the radio frequency wave in the chamber means (14c).

Dwg.1/13

Title Terms: COAXIAL; CAVITY; TYPE; RF; WAVE; PLASMA; GENERATE; APPARATUS; ELONGATE; PROBE; MOUNT; COUPLE; COAXIAL; CONDUCTOR; LONGITUDE; AXIS; COUPLE; CHAMBER

Derwent Class: U11; V05; X14

International Patent Class (Main): **H05H-001/46**

International Patent Class (Additional): H01J-007/24; H01J-027/18; **H01J-037/31** ; H05B-031/26

File Segment: EPI

Manual Codes (EPI/S-X): U11-C03C; U11-C09X; V05-F09; X14-F

29/9/15 (Item 11 from file: 350)

008202442 **Image available**

WPI Acc No: 1990-089443/199012

XRAM Acc No: C90-039379

XRPX Acc No: N90-068997

Free-flowing solid materials conductive drying - by feeding down concentric vertical pipes in gap between which combustion prodn. are fed for evapn.

Patent Assignee: CHELY CA[redacted]MFR AUTOM (CHCA-R)
Inventor: GORBACHEV I M; [redacted]OROSHIN Y U E; POTYSEV V M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
SU 1506246	A	19890907	SU 3718999	A	19840330	199012	B

Priority Applications (No Type Date): SU 3718999 A 19840330
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 1506246	A		2		

Abstract (Basic): SU 1506246 A

The drying equipment comprises chamber (1) made as **two** coaxial **tubes** with gap; **inner tube** (2) is for material being dried (metal chips) and outer tube (3) is to pass heating medium. Tubes are linked together by bottom and top flanges (4,5); opening (6) enables moisture and oil vapour to be **removed** from chips. **Tube** (2) has loading pipe (7) at top end with screw (8) to **move** chips downwards; **tube** (3) has spiral guide (9) linked to discharge pipe (10) at bottom. Burner (11) has combustion chamber (12). Moist material for drying is fed from pipe (7) to **inner tube** ' (2) of chamber (1) to completely fill it. Motor (13) for screw (8), and burner (11), are switched on. Fuel combustion prods. goes via gap between tubes along spiral guide (9) to heat **inner tube** and dry the metal chips moving downwards; oil and water vapours separate via opening (6) in bottom flange (4) to be burned in chamber (12) and removed via pipe (15). Plough (18) in **discharge** pipe (10) control **productivity** . USE/ADVANTAGE - In metallurgical prodn., for drying free-flowing solid materials, e.g. in non-ferrous metallurgy, etc. to dry disperse materials. Economy is increased by burning the oil vapours removed from the material being dried, with chambers placed vertically. Bul.33/7.9.89 (2pp Dwg.No. 1/1)

Title Terms: FREE; FLOW; SOLID; MATERIAL; CONDUCTING; DRY; FEED; DOWN; CONCENTRIC; VERTICAL; PIPE; GAP; COMBUST; PRODUCE; FEED; EVAPORATION
Derwent Class: M25; Q76
International Patent Class (Additional): F26B-011/16; F26B-017/22
File Segment: CPI; EngPI
Manual Codes (CPI/A-N): M25-X

29/9/16 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007521902
WPI Acc No: 1988-155835/198823
XRPX Acc No: N88-119079
Outlet cap for beer-tapping - has thin sleeve in top of tube separating beer from incoming air
Patent Assignee: MOGLER J (MOGL-I)
Inventor: WIEDMANN H; MOGLER J
Number of Countries: 013 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3640190	A	19880601	DE 3640190	A	19861125	198823	B
EP 270878	A	19880615	EP 87116850	A	19871114	198824	
US 4828147	A	19890509	US 87125322	A	19871125	198922	
EP 270878	B	19910116				199103	
CA 1283637	C	19910430				199122	
ES 2020248	B	19910801				199135	
DE 3640190	C2	19970522	DE 3640190	A	19861125	199725	

Priority Applications (No Type Date): DE 3640190 A 19861125
Cited Patents: BE 475086; DE 2531697; FR 624730; GB 1068055; US 1995098; US 3327899
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3640190	A		6		

EP 270878 A G
Designated States (Regional): AT BE CH ES FR GB IT LI NL SE
US 4828147 A 6
EP 270878 B
Designated States (Regional): AT BE CH ES FR GB IT LI NL SE
DE 3640190 C2 5 B67D-001/04

Abstract (Basic): DE 3640190 A

The equipment taps beer from vessels, particularly cans, having a housing fixed to the can and an outlet shut off by the valve, also an air pump or other means for generating gas pressure. A puncturing tube (12) on the housing forms a passage leading to the outlet and has lateral air outlets, through which the air from the pump passes into the top of the can above the beer.

The free cross-section of the beer outlet passage in the tube (12) is determined by the internal dia. of the latter over the greater part of its length. Only the top part contains a thin-walled sleeve (26) of smaller external dia. than the **tube internal** dia. This separate the beer outlet passage from the incoming air, and is sealed to the passage below the air outlets.

USE - Faster tapping rate without noticeable foam formation due to release of carbonic acid.

1/3

Abstract (Equivalent): EP 270878 B

A device for tapping beer from containers, especially from kegs, comprising a housing, which can be fixed to the container, having a tapping valve, a closable outlet passage passing through the tapping valve, an air pump, an **extractor tube** connected to the outlet, which can be introduced into the container forming a channel for the outflow of beer and comprising lateral air outlet openings, and a thin walled coupling bushing, located only in the upper region of the **extractor tube** , having a smaller external diameter than the internal diameter of the **extractor tube** and a smaller length than the **extractor tube** , which coupling bushing forms a seal against the beer outflow channel below the air outlet openings and separates this channel from the flow path of the air supplied so that air can be introduced into the container above the level of the beer from the air outlets through an annular space formed between the coupling bushing and the **extractor tube** , and wherein the housing comprises an arm, equipped with the outlet, which can be fixed to the rim of the container; characterised in that A. a permanently attached piston (16) of the air pump (15) is formed on the housing (1); B. the coupling bushing (26) is a component of a distributor element which can be fixed to the housing (1); C. a first flexible tube nipple (32) and a **second** flexible **tube** nipple (31) are provided on the distributor element (25) to which the first flexible tube (3) and the **second** flexible **tube** (21) are fastened respectively; D. the distributor element (25) contains the tapping valve (27); E. A first flexible **tube** (3) extending **inside** the arm (2) which can be fixed to the housing (1) connects the outlet (4) to the outlet from the tapping valve (nipple 32) on the distributor element (25); and F. a **second** flexible **tube** (21) extending **inside** the piston (16) connects the air pump (15) to the annular space between the coupling bushing and **extractor tube** .

Abstract (Equivalent): US 4828147 A

A housing has an outlet closable by a tapping valve and an air pump. Attached to the housing is a piercing pipe which can be introduced into the can and **forms** a beer **discharge** channel which is in communication with the outlet. The air supplied by the air pump flows separately from the beer through lateral air outlet openings of the piercing pipe into the can above the level of the beer and applies pressure to the beer. The flow cross-section of the beer discharge channel in the piercing pipe is determined throughout its entire length by the internal diameter of this pipe. A thin-walled sleeve of smaller external diameter than the internal diameter of the piercing pipe separates the beer discharge channel from the flow path of the supplied air and is sealed relative to this channel below the air outlet openings, is being provided in the upper region only of the piercing

pipe. USE - Device for tapping, e.g. beer from cans.
(6pp
Title Terms: OUTLET; CAP; BEER; TAP; THIN; SLEEVE; TOP; TUBE; SEPARATE; BEER; INCOMING; AIR
Derwent Class: Q34; Q39
International Patent Class (Main): B67D-001/04
International Patent Class (Additional): B65D-083/00
File Segment: EngPI

29/9/17 (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007331797
WPI Acc No: 1987-328804/198747
XRAM Acc No: C87-140171
XRPX Acc No: N87-246101
Discharge tube mfr. - by upsetting straight tube after heating to soften and before bending through two right angles
Patent Assignee: PATENT TREUHAND GES ELEKTRISCH (PATT); PATENT TREUHAND GES ELEKTRISCHE (PATT)
Inventor: ECKSTIN G O; KLEIN L; PANOFSKI E; PLISCHKE J; SCHMIDT H
Number of Countries: 007 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 246548	A	19871125	EP 87106881	A	19870512	198747 B
DE 3707679	A	19871126				198748
JP 62283835	A	19871209	JP 87121461	A	19870520	198804
US 4801323	A	19890131	US 8751909	A	19870519	198907
EP 246548	B	19900321				199012
DE 3761972	G	19900426				199018
KR 9402055	B1	19940316	KR 874984	A	19870520	199601

Priority Applications (No Type Date): DE 3707679 A 19870310; DE 3616986 A 19860521
Cited Patents: DE 3544465; EP 61758; FR 2322448; US 1948560; US 3263852; US 3679385
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 246548	A	G	9		
Designated States (Regional): DE FR GB IT					
US 4801323	A		9		
EP 246548	B	G			
Designated States (Regional): DE FR GB IT					
KR 9402055	B1			C03B-023/07	

Abstract (Basic): EP 246548 A
A tubular discharge vessel for a compact low-pressure **discharge** lamp is **made** with several straight sections and several 180 deg. bends from a straight glass tube by heating the area concerned to the softening point and by bending the two ends. Before each bending, the softened area is upset by axial compression to thicken the wall.
ADVANTAGE - This ensures that the wall thickness does not drop below a certain minimum even where the radius of the bend is a maximum.
10/2
Abstract (Equivalent): EP 246548 B
A process for the production of a singly or multiply bent, tubular discharge vessel comprising a straight glass tube for a compact low pressure discharge lamp with a plurality of straight tube sections and 180 deg. bends (17), wherein, in order to form a 180 deg. bend (17) at a specific location of the glass tube (1,26) - that section of the tube (A,B) required for the formation of the 180 deg.C bend is heated to softening point - the straight tube sections (12, 13; 41, 42) which laterally adjoin the heated section (A,B) are then bent towards one another until they are aligned in parallel - and after the bending process e the respective 180 deg. bend (17) of the glass trube (16) is inserted into an appropriate mould (18) and the 180 deg.C bend is

provided with rectangular corners (24, 25) by blowing compressed air into the ends of the tube, characterised in that prior to the respective bending process the glass tube is caused to bulge in the heated section (A,B) in tha t the tube sections which laterally adjoin the heated section (A,B) are brought together axially in direciton of heated tube section (A,B). (9pp)

Abstract (Equivalent): US 4801323 A

U-shaped, single or multiple-bend discharge vessel for a compact low pressure discharge lamp, esp. U-shaped vessel is produced with **two** straight **tube** sections and a cross-connecting section from a glass tube which is heated at least over the length of the cross connecting section for forming a 180 deg. section to form a softened region. The straight sections are moved laterally towards each other to thicken the walls of the **tube** at the **central** section by compression. The lateral **tube** sections are then **rotated** to form the U-shaped configuration.

ADVANTAGE - Min. wall thickness is assured even in regions where bend is substantial. (9pp

Title Terms: DISCHARGE; TUBE; MANUFACTURE; UPSET; STRAIGHT; TUBE; AFTER; HEAT; SOFTEN; BEND; THROUGH; TWO; RIGHT; ANGLE

Derwent Class: L01; L03; X26

International Patent Class (Main): C03B-023/07

International Patent Class (Additional): C03B-023/06; H01J-061/30

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L03-C03

Manual Codes (EPI/S-X): X26-A03

29/9/18 (Item 14 from file: 350)

DIALOG(R)File 350:Derwent WPIX

003613974

WPI Acc No: 1983-G2173K/198319

XRPX Acc No: N83-080730

Dispensing valve for viscous concentrate - has resilient plug on tip of inner tube forced against hole at tip of outer tube

Patent Assignee: BOSCH SIEMENS HAUSGERAETE GMBH (BOSC)

Inventor: DEININGER A

Number of Countries: 008 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 77910	A	19830504				198319 B

Priority Applications (No Type Date): DE 81U30642 U 19811020

Cited Patents: DE 2614782; FR 1183324; FR 1311109; FR 785809; US 2645380; US 2689669

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 77910	A	G	9		

Designated States (Regional): AT BE CH DE FR GB IT LI

Abstract (Basic): EP 77910 A

The dispensing valve for viscose liquids, such as beverage concentrates for a soft drink dispensing machine, has an outer **tube** (2), **inside** which **slides** axially an **inner tube** (3). The **two tubes** have conical tips, and the **inner tube** is fitted with a resilient plug (4) locked into its tip, acting as a valve member. Its rounded nose blocks the discharge opening (5) of the outer sleeve, when forced downwards.

The plug has a projection (6) on top, which is locked into the bottom of the **inner tube** . The bottom of the outer tube has a horizontal flange (9) which extends inwards to **form** the **discharge** opening.

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Title Terms: DISPENSE; VALVE; VISCOSITY; CONCENTRATE; RESILIENT; PLUG; TIP; INNER; TUBE; FORCE; HOLE; TIP; OUTER; TUBE

Derwent Class: Q39; Q66

International Patent Class (Additional): B67D-001/00; F16K-001/46; F16K-003/26
File Segment: EngPI

29/9/19 (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX

003261853
WPI Acc No: 1982-B2735J/198251
Rotary heat exchanger for vapour generator - has suction tube between immersed coil and double walled rotary supply tube
Patent Assignee: FUJI KOSAN KK (FUJI-N); SEIWA LTD (SEIW-N)
Inventor: KIMOTO H; NAKAMURA N
Number of Countries: 003 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3121757	A	19821216				198251	B
NL 8102531	A	19821216				198302	
US 4377202	A	19830322				198314	

Priority Applications (No Type Date): DE 3121757 A 19810601
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3121757	A		17		

Abstract (Basic): DE 3121757 A

The rotary heat exchanger with a vessel (1) containing fluid to be vapourised, has a rotor **inside** consisting of a **tube** wound into a spherically shaped coil (4). This is attached to a double walled horizontal **tube** (5,7) **rotated** by a chain wheel (11) attached to its outermost end connected to a motor driven chain drive (13), and forming the heat source.

The **inner tube** (7) **forms** the **discharge** tube, and collects fluid at its innermost end after it has flowed through the rotor coil. The outer tube (5) has its inlet opening (6) adjacent to the outlet connection (7b). The coil encloses a sleeve forming a suction **tube inside** which is a helical thread made of strip material, mounted on the outer tube of the **double** walled **tube** .

Title Terms: ROTATING; HEAT; EXCHANGE; VAPOUR; GENERATOR; SUCTION; TUBE; IMMERSE; COIL; DOUBLE; WALL; ROTATING; SUPPLY; TUBE
Derwent Class: Q78
International Patent Class (Additional): F28D-001/04; F28D-011/04; F28D-019/04; F28F-005/06
File Segment: EngPI

29/9/20 (Item 16 from file: 350)
DIALOG(R)File 350:Derwent WPIX

002222620
WPI Acc No: 1979-21796B/197911
Stuffing horn assembly with separate horns - slidable and rotatable w.r.t. central **manifold** tube **connected to sausage machine**
Patent Assignee: RHEEM MFG CO (RHEE); TIPPER TIE INC (TIPP-N)
Inventor: GAY R W
Number of Countries: 008 Number of Patents: 009
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4142273	A	19790306				197911	B
DE 2826596	A	19790510				197920	
SE 7807042	A	19790611				197926	
FR 2407672	A	19790706				197932	
CA 1109728	A	19810929				198144	
GB 1602798	A	19811118				198147	
CH 632647	A	19821029				198246	

DE 2826596 C 19840[redacted] [redacted]8424
IT 1107664 B 19851[redacted] [redacted]8716

Priority Applications (No Type Date): US 77848633 A 19771104
Abstract (Basic): US 4142273 A

A stuffing horn assembly for transporting and **discharging** comminuted food **products** into a casing comprises an **inner** manifold **tube** mounted on a support and slidably mounting an outer **tube** which is alo **rotatable** with repeat to the manifold tube.

At least **two** branch **tubes** project from the outer tube and provide **product discharge** openings. An annular gear is mounted on the **inner tube** and includes projecting locking pins for engaging the outer **tube** for **rotating** the **tube** on the manifold tube. A yoke is attached to the outer tube and a drive cylinder is used to slidably posn. the outer tube on the manifold tube to any one of a no. of indexed posns.

The outer tube and connected branch tubes can be indexed both longitudinally and rotatably so as to sequentially connect separate horns to a main sausage discharge tube. The horn assembly has a min, no. of mechanical parts and is therefore easy to service and maintain

Title Terms: STUFF; HORN; ASSEMBLE; SEPARATE; HORN; SLIDE; ROTATING; CENTRAL; MANIFOLD; TUBE; CONNECT; SAUSAGE; MACHINE
Derwent Class: D12
International Patent Class (Additional): A22C-011/02; A22C-013/02
File Segment: CPI
Manual Codes (CPI/A-N): D02-A03

29/9/21 (Item 17 from file: 350)
DIALOG(R)File 350:Derwent WPIX

002125426
WPI Acc No: 1979-E5356B/197921
Magnetic deflection system for electron beam - has saddle coil configuration modified to eliminate astigmatism in target plane
Patent Assignee: HAHN E (HAHN-I)
Inventor: HAHN E
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 134584	A	19790307				197921 B

Priority Applications (No Type Date): DD 202743 A 19771219

Abstract (Basic): DD 134584 A

The magnetic deflection system, for a scanning electron microscope, and X-ray analysers etc., needs few components to correct picture errors. This is accomplished by employing a saddle coil arrangement modified to avoid astigmatism in the plane of the target.

The axial length of the **twin - conductor** frame is **adjusted** by shortening the length of at least one **two - conductor** frame with a **centre** angle of >60 deg. such that the sum of the contributions from the individual **twin - conductor** frames makes astigmatism zero.

Title Terms: MAGNETIC; DEFLECT; SYSTEM; ELECTRON; BEAM; SADDLE; COIL; CONFIGURATION; MODIFIED; ELIMINATE; ASTIGMATIC; TARGET; PLANE
Derwent Class: V05
International Patent Class (Additional): **H01J-037/14**
File Segment: EPI

29/9/22 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX

001196664
WPI Acc No: 1974-70550V/197440
Waterlogged petroleum stage processer - gas separator has turbulisers oil

trap with screw blades

Patent Assignee: MOSCOW PETROCHEM GAS IND (MOSC-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 402536	A	19740315				197440 B

Priority Applications (No Type Date): SU 1298328 A 19690117

Abstract (Basic): SU 402536 A

Multi-stage unit for removing gas, water and salts from petroleum at point of prod. or in refineries, incorporates gas separator, settling tank with partitioned stages and a oil trap. To obtain superior separation efficiency the gas separator consists of a perforated **tube** with **adjustably** positioned angle brackets on the outside to turbulise the entering oil feed. The oil trap itself consists of **two tubes** box mated to form a shorter **inner tube** having perforated screw blades. The outer tube is fitted with a bottom mounted bleed valve which **discharges** the petroleum processed **product** . Use is made of a filling of large pored hydrophilic material in the sections partitioned off along the processer, spraying in the hot water and reagent from above in these compartments.

Title Terms: WATERLOGGED; PETROL; STAGE; GAS; SEPARATE; TURBULENCE; OIL; TRAP; SCREW; BLADE
Derwent Class: H01
International Patent Class (Additional): C02B-009/02; C10G-033/06
File Segment: CPI
Manual Codes (CPI/A-N): H01-D04; H01-E01
?

File 348:EUROPEAN PATENTS 1978-2002/Oct W03
(c) 2002 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20021024,UT=20021017
(c) 2002 WIPO/Univentio

Set	Items	Description
S1	243209	DISCHARG???? ? OR PLASMA
S2	32967	S1(3N)(GENERAT? OR SOURCE? ? OR PRODUC?????? ? OR PROD? ? - OR CREAT???? ?)
S3	30593	S1(3N)(FORM?? ? OR FORMING? ? OR FORMAT???? ? OR MAKE? ? OR MADE? ? OR MAKING? ? OR SYNTHESI? OR PREPAR?????? ? OR PREP? ? OR PRPN?)
S4	337106	TUBE? ? OR COND OR CONDUCTER? ? OR CONDUCTOR? ?
S5	52411	S4(3N)(INNER? OR INSIDE? OR CENTRAL? OR CENTER? OR CENTRE? OR INTERIOR? OR INTERNAL? OR INMOST? OR MIDDLE?)
S6	17037	S4(3N)(DISPLAC? OR MOVAB? OR MOVE? ? OR MOVING OR SHIFT???? ? OR SLID??? ? OR MOBIL?????? ? OR REPOSITION? OR RE()POSITI-ON???? ? OR REARRANG?)
S7	35051	S4(3N)(RE()ARRANG?????? ? OR ADJUST? OR REPLAC? OR ROTAT??-???? ? OR REMOV? OR INTERCHANG? OR EXCHANG? OR SWITCH? OR INT-ER()CHANG?)
S8	4936	S4(3N)(WITHDRAW? OR 'WITH'()DRAW???? ? OR EXTRACT???? ?)
S9	27367	(CO()AXIAL? OR COAXIAL? OR MULTIPLE? ? OR TWO OR PAIR?? ? - OR MANY OR MULTI OR SEVERAL OR NUMEROUS OR PLURAL? OR NUMBER)-(1W)S4
S10	11865	(SECOND OR DOUBLE OR DUAL OR TWIN)(1W)S4
S11	912	S2:S3(S)S5
S12	514	S2:S3(S)S6:S8
S13	84	S11(S)S12
S14	17	S13(S)S9:S10
S15	15	S14 NOT BLOOD
S16	4392	IC='H01J-037'
S17	2078	IC='H01J-037/32':IC='H01J-037/34'
S18	4	IC='H01J-037/36'
S19	1282	IC='H05H-001'
S20	1136	S5(S)S6:S8(S)S9:S10
S21	4	S20 AND S16:S19
S22	19	S15 OR S21

?t22/5,k/all

22/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01386643
Fluorescent lamp, self-ballasted fluorescent lamp and lighting apparatus
Fluoreszenzlampe, Fluoreszenzlampe mit Eigenballast, und Beleuchtungsvorrichtung
Tube fluorescent, tube fluorescent a autostabilisation, et appareil d'eclairage
PATENT ASSIGNEE:
TOSHIBA LIGHTING & TECHNOLOGY CORPORATION, (1107302), 3-1, Higashishinagawa 4-Chome, Shinagawa-ku, Tokyo, (JP), (Applicant designated States: all)
INVENTOR:
Ogishi, Kazuhisa, c/o Toshiba Lighting & Tech Corp, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
Ito, Hidenori, c/o Toshiba Lighting & Tech Corp, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
Kawashima, Seiko, c/o Toshiba Lighting & Tech Corp, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
Tamura, Nobuhiro, c/o Toshiba Lighting & Tech Corp, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
Sakakibara, Yuichi, c/o Toshiba Lighting & Tec Cor, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
Hatakeyama, Keiji, c/o Toshiba Lighting & Tec Corp, 3-1, Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, (JP)
LEGAL REPRESENTATIVE:

O'Connell, David Christ[redacted]er (62551), Haseltine Lake & C[redacted] Imperial House, 15-19 Kingsway, London WC2B 6UD, (GB)
PATENT (CC, No, Kind, Date): EP 1176627 A2 020130 (Basic)
APPLICATION (CC, No, Date): EP 2001306514 010730;
PRIORITY (CC, No, Date): JP 2000229744 000728; JP 2000268433 000831; JP 2000402826 001228; JP 2001132632 010427
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H01J-061/30; H01J-061/72

ABSTRACT EP 1176627 A2

The fluorescent lamp (9) has a bulb formed by lead-free glass having an ultraviolet ray transmission factor of 40% or less at 300 nm or less, mercury gas and rare gas sealed in the glass bulb, a phosphor layer formed on the inner wall of the glass bulb, and a pair of discharge electrodes for causing discharge in the glass bulb and the lead-free glass contains an ultraviolet ray reduction material for absorbing or reflecting ultraviolet rays generated from the fluorescent lamp and can reduce ultraviolet rays of 40% or less at a wavelength of 300 nm or less.

ABSTRACT WORD COUNT: 100
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 020130 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200205	975
SPEC A	(English)	200205	16112
Total word count - document A			17087
Total word count - document B			0
Total word count - documents A + B			17087

...SPECIFICATION the constitution shown in FIG. 16.
Namely, as shown in FIG. 16, a bulb 61a **forms** a **discharge** line that three U-shaped glass tubes 61a1 with an outer diameter of 10 mm are connected and bent by **two** connection **tubes** 61a2 and in the same way as with the self-ballasted fluorescent lamp having the...a phosphor layer 61c on the inner surface of each of the U-shaped glass **tubes** 61a1 are removed. Narrow **tubes** 61a4 are interconnected **inside** the bulb 61a. For convenience, only the **central** exhaust **tube** is shown in a cross sectional view and the inside thereof is shown. The exhaust...

22/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01065110
Electric discharge lamp and method of making the same
Elektrische Entladungslampe und Verfahren zu deren Herstellung
Lampe a decharge electrique et procede pour sa fabrication
PATENT ASSIGNEE:
Phoenix Electric Co., Ltd., (2564670), 703, Aza Takamaru Mikage, Toyotomi-cho, Himeji-Shi, Hyogo-ken, (JP), (Applicant designated States: all)
INVENTOR:
Nakagawa, Atsuji, c/o Phoenix Electric Co., Ltd., 703, Aza Takamaru Mikage, Toyotomi-cho, Himeji-shi, Hyogo-ken, (JP)
LEGAL REPRESENTATIVE:
Hillier, Peter et al (47812), Edward Evans Barker Clifford's Inn Fetter Lane, London EC4A 1BZ, (GB)
PATENT (CC, No, Kind, Date): EP 938125 A2 990825 (Basic)
EP 938125 A3 020123
APPLICATION (CC, No, Date): EP 99300634 990128;
PRIORITY (CC, No, Date): JP 9854278 980218

DESIGNATED STATES: BE; DE; FR; GB; NL
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H01J-061/30; H01J-005/02; H01J-009/40; H01J-061/86

ABSTRACT EP 938125 A2

An electric discharge lamp is provided comprising; a lamp envelop including a first and a second sealing tubes both of which are sealed and a light-emitting portion located between the sealing tubes; a pier of electrodes disposed in the light-emitting portion; and a filler substance encapsulated within the lamp envelop, one of the sealing tubes having a seal-cut trace of a tip tube that has been used for introducing the filler substance into the lamp envelop therethrough.

ABSTRACT WORD COUNT: 78
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change:	020123	A2 International Patent Classification changed: 20011205
Application:	990825	A2 Published application without search report
Search Report:	020123	A3 Separate publication of the search report
Examination:	020904	A2 Date of request for examination: 20020701

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9934	246
SPEC A	(English)	9934	2662
Total word count - document A			2908
Total word count - document B			0
Total word count - documents A + B			2908

...SPECIFICATION accordance with a second aspect of the present invention, there is provided a method of **making** a **discharge** lamp comprising the steps of: providing a lamp envelop including a first and a **second** sealing **tubes** , a light-emitting portion located between the sealing tubes, and a tip tube connected to the **second** sealing **tube** for communication therbetween; inserting a first mount having a first electrode into the first sealing...

...sealing the first sealing tube; inserting a second mount having a second electrode into the **second** sealing **tube** through an open end thereof so that the second electrode is located in the light-emitting portion and then sealing a portion of the **second** sealing **tube** so as to maintain the communication between the tip tube and the **second** sealing **tube** ; cleaning the **inside** of the light-emitting portion an then introducing a filler substance and a rare gas through the tip tube into the light-emitting portion; **removing** the tip **tube** from the **second** sealing **tube** by sealing and cutting; and sealing the rest of the **second** sealing **tube** in which a seal-cut trace of the tip tube is present.

With this method...

...CLAIMS used for introducing the filler substance into the lamp envelop therethrough.

2. A method of **making** a **discharge** lamp comprising the steps of: providing a lamp envelop including a first and a **second** sealing **tubes** , a light-emitting portion located between the sealing tubes, and tip tube connected to the **second** sealing **tube** for communication therebetween; inserting a first mount having a first electrode into the first sealing...

...sealing the first sealing tube; inserting a second mount having a second electrode into the **second** sealing **tube** through an open end thereof so that the second electrode is located in the light-emitting portion and then sealing a portion of the **second** sealing **tube** so as to maintain the communication between the tip tube and the **second** sealing **tube** ; cleaning the **inside** of the light-emitting portion

and then introducing filler substance and a rare gas through the tip tube into the light-emitting portion; **removing** the tip **tube** from the **second** sealing **tube** by sealing and cutting; and sealing the rest of the **second** sealing **tube** in which a seal-cut trace of the tip tube is present.

22/5,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01052626
Plasma torch with adjustable distributor and gas analysis system using such a torch
Plasmabrenner mit Verstellbarer Verteilung und Gasanalysenanlage die diesen Brenner gebraucht
Torche a plasma a injecteur reglable et installation d'analyse d'un gaz utilisant une telle torche
PATENT ASSIGNEE:
L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE, (203140), 75, Quai d'Orsay, 75321 Paris Cedex 07, (FR), (applicant designated states: AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
Carre, Martine, 17, rue Sainte Adelaide, 78000 Versailles, (FR)
Coffre, Eric, 6, rue Carnot, 78190 Trappes, (FR)
Trassy, Christian, c/o Lab. EPM ENSHMG, 1340, rue de la Piscine, 38402 Saint-Martin-d'Heres, (FR)
LEGAL REPRESENTATIVE:
Mellul, Sylvie Lisette et al (86161), L'Air Liquide, Service Propriete Industrielle, 75, Quai d'Orsay, 75321 Paris Cedex 07, (FR)
PATENT (CC, No, Kind, Date): EP 930810 A1 990721 (Basic)
APPLICATION (CC, No, Date): EP 98402992 981130;
PRIORITY (CC, No, Date): FR 9716619 971229; FR 9716620 971229
DESIGNATED STATES: BE; DE; FR; GB; IE; IT; NL; SE
INTERNATIONAL PATENT CLASS: **H05H-001/30**

ABSTRACT EP 930810 A1 (Translated)
Plasma torch with adjustable injector for gas analysis
The torch (10) has a tubular central injector (12) within a double sleeve (28,30) whose outer member (30) extends through a high-frequency (5-100 MHz) coil (16). The gas (26) for analysis is delivered by the injector, while the annular passage (32) of the double sleeve supplies e.g. argon, which in the coil's field forms the plasma (P).
The Lorentz effect produces a flow (F1) towards the injector in the central zone into which the subject gas is injected (F2), directing the latter towards the plasma periphery. Opt., the subject gas flow is centered in a flow of guidance gas supplied via an additional **coaxial tube** . Impurities in the subject gas are assessed by a photoelectric detector (34) and associated processor (36) on the basis of the wavelength of the radiation produced. The effective diameter of the injector is made variable by introducing an axially **mobile inner tube** in the gas passage (26), to carry the gas flow. A pneumatic actuator nearer the gas source, by lowering the end of the **inner tube** , increases the effective flow diameter from that of the inner to that of the outer tube (20). By adding further concentric tubes diameter control can be further elaborated. Analysis is facilitated by selecting the appropriate diameter for the particular subject gas.
TRANSLATED ABSTRACT WORD COUNT: 221

ABSTRACT EP 930810 A1
Cette torche a plasma (10) pour l'excitation d'un gaz en vue de son analyse comprend un injecteur (12) tubulaire destine a etre raccorde a une source d'alimentation en gaz a analyser, et un manchon (14) cylindrique externe coaxial a l'injecteur (12) et delimitant un canal (32) annulaire cylindrique d'alimentation en un gaz plasmagene, destine a etre raccorde a une source d'alimentation correspondante en vue de la production d'un plasma (P). L'injecteur (12) est de diametre variable.

ABSTRACT WORD COUNT: 77

LEGAL STATUS (Type, Pub Date, Kind, Text):
Assignee: 020424 A1 Transfer of rights to new applicant: L'air Liquide, S.A. a Directoire et Conseil de Surveillance pour l'Etude et l'Exploitation des Procedes Georges Claude (3952750) 75, Quai d'Orsay 75321 Paris Cedex 07 FR
Examination: 20000322 A1 Date of request for examination: 20000121
Application: 990721 A1 Published application (A1with Search Report ;A2without Search Report)
LANGUAGE (Publication,Procedural,Application): French; French; French
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(French)	9929	711
SPEC A	(French)	9929	4100
Total word count - document A			4811
Total word count - document B			0
Total word count - documents A + B			4811

INTERNATIONAL PATENT CLASS: **H05H-001/30**

...ABSTRACT subject gas flow is centered in a flow of guidance gas supplied via an additional **coaxial tube** . Impurities in the subject gas are assessed by a photoelectric detector (34) and associated processor...

...radiation produced. The effective diameter of the injector is made variable by introducing an axially **mobile inner tube** in the gas passage (26), to carry the gas flow. A pneumatic actuator nearer the gas source, by lowering the end of the **inner tube** , increases the effective flow diameter from that of the inner to that of the outer...

22/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00745824
Microwave energized ion source for ion implantation
Mikrowellen-Ionenquelle zur Ionenimplantation
Source d'ion a micro-ondes pour l'implantation ionique
PATENT ASSIGNEE:
EATON CORPORATION, (218424), Eaton Center, 1111 Superior Avenue, Cleveland, Ohio 44114-2584, (US), (applicant designated states: DE;ES;FR;GB;IT)
INVENTOR:
Sferlazzo, Piero, 11 Doncaster Road, Lynnfield, Massachusetts 01940, (US)
Rose, Peter, 90 Cranemore Road, P.O. Box 1301, North Conway, North Hampshire 03860, (US)
Trueira, Frank Raymond, 46 David Drive, York, Maine 03909, (US)
LEGAL REPRESENTATIVE:
Burke, Steven David et al (47741), R.G.C. Jenkins & Co. 26 Caxton Street, London SW1H 0RJ, (GB)
PATENT (CC, No, Kind, Date): EP 703597 A1 960327 (Basic)
EP 703597 B1 990113
APPLICATION (CC, No, Date): EP 95306700 950922;
PRIORITY (CC, No, Date): US 312142 940926
DESIGNATED STATES: DE; ES; FR; GB; IT
INTERNATIONAL PATENT CLASS: **H01J-037/32** ; H01J-027/18

ABSTRACT EP 703597 A1
A microwave energized ion source apparatus (12) is supported by a support tube (94) extending into a cavity (57) defined by a housing assembly (22) and includes a dielectric plasma chamber (42), a pair of vaporizers (44), a microwave tuning and transmission assembly (40) and a magnetic field generating assembly (46). The chamber (42) defines an interior region (50) into which source material and ionizable gas are routed. The chamber (42) is overlied by a cap (62) having an arc slit

(64) through which gen[redacted]ted ions exit the chamber (42) [redacted]e microwave tuning and transmission assembly (40), which feeds microwave energy to the chamber (42) in the TEM mode, includes a coaxial microwave energy transmission line center conductor (54). One end (66) of the conductor (54) fits into a recessed portion (68) of the chamber (42) and transmits microwave energy to the chamber (42). The center conductor (54) extends through an evacuated portion of a coaxial tube (56) surrounding the conductor (54). A vacuum seal (58) is disposed in or adjacent the coaxial tube (56) and from the boundary between the evacuated coaxial tube (56) and a non-evacuated region. (see image in original document)

ABSTRACT WORD COUNT: 220

LEGAL STATUS (Type, Pub Date, Kind, Text):
Oppn None: 20000105 B1 No opposition filed: 19991014
Application: 960327 A1 Published application (Alwith Search Report ;A2without Search Report)
Examination: 961113 A1 Date of filing of request for examination: 960917
Examination: 970820 A1 Date of despatch of first examination report: 970702
Grant: 990113 B1 Granted patent
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9902	1179
CLAIMS B	(German)	9902	1102
CLAIMS B	(French)	9902	1421
SPEC B	(English)	9902	8567
Total word count - document A			0
Total word count - document B			12269
Total word count - documents A + B			12269

INTERNATIONAL PATENT CLASS: **H01J-037/32** ...

...SPECIFICATION turn is coupled to the ion source housing assembly 22, the axial expansion of the **coaxial tube** tends to **move** the plasma chamber 42 axially toward the support tube first end 92 (that is, to...

...sufficient length in the axial direction (that is, in a direction parallel to the support **tube central** axis and the predetermined beam line) such that the pins continue to

22/5,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00426970
Device for forming an inserting hole.
Einrichtung zur Bildung einer Einfuhrungsoffnung.
Dispositif pour faconner un orifice d'introduction.
PATENT ASSIGNEE:
NISSHO CORPORATION, (752513), 9-3, Honjo-nishi 3-chome Kita-ku, Osaka-shi , (JP), (applicant designated states: BE;DE;FR;GB;IT;NL;SE)
INVENTOR:
Horie, Masao, 50-9, Fujimidai, Otsu-shi, Shiga-ken, (JP)
Kawamoto, Shoji, 3-24-14, Matsugaoka, Takatsuki-shi, Osaka-fu, (JP)
LEGAL REPRESENTATIVE:
Turk, Gille, Hrabal, Leifert (100971), Brucknerstrasse 20, D-40593 Dusseldorf, (DE)
PATENT (CC, No, Kind, Date): EP 435157 A1 910703 (Basic)
EP 435157 B1 940518
APPLICATION (CC, No, Date): EP 90124809 901219;
PRIORITY (CC, No, Date): JP 89337658 891226
DESIGNATED STATES: BE; DE; FR; GB; IT; NL; SE
INTERNATIONAL PATENT CLASS: A61M-025/01
CITED PATENTS (EP A): US 4306562 A; US 4306562 A; US 4776846 A; FR 2565815

A

ABSTRACT EP 435157 A1

A device for forming an inserting hole comprising at least two tubes having different outer diameters, and at least one of a guide wire and a sticking needle. A largest diameter tube (T) has at its thick-walled end (10) at least one longitudinal and approximately linear tearing line (8). The largest diameter tube (T), after being inserted into the body, can be torn using the tearing line (8) and fixed to the skin of a patient by sewing a folded portion of the tube (T) on the skin. The tube (T) is not moved by the breathing or pressure since it is fixed to the skin. When the tearing line (8) is formed by an ultrasonic cutter, width (W) of the tearing line (8) can be made narrow thereby preventing adhesion of bacteria to a cut portion (13) and unexpected opening of the tearing line (8) in the body.

ABSTRACT WORD COUNT: 151

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	910703	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	911009	A1	Date of filing of request for examination: 910808
Examination:	921223	A1	Date of despatch of first examination report: 921106
Grant:	940518	B1	Granted patent
Oppn None:	950510	B1	No opposition filed
Change:	970723	B1	Rectifications of patent applications (change)

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	387
CLAIMS B	(German)	EPBBF1	386
CLAIMS B	(French)	EPBBF1	421
SPEC B	(English)	EPBBF1	4364
Total word count - document A			0
Total word count - document B			5558
Total word count - documents A + B			5558

...SPECIFICATION end to be taper-shaped like the small diameter tube 16.
A medium large diameter **tube** has an **inner** diameter of 3.4 mm so as to cover the outer periphery of the small...

...an outer diameter of 5.3 mm which is larger than that of the above-**mentioned** medium diameter **tube** 17. The total length of the medium large diameter tube is about 20 cm like...
...large diameter tube are the same as the medium diameter tube 17.
A large diameter **tube** 18 has an **inner** diameter of 3.4 mm so as to cover the outer periphery of the small...

...pulling out of an endoscope 3, and the insertion of a drainage tube 6. The **tube** 1 has an **inner** diameter of 6.0 mm, an outer diameter of 6.3 mm, and a total...

...20 cm. Unlike the above-mentioned tubes 16, 17 and 18, it is preferable to **make** the **tube** 1 thin as long as it maintains rigidity.
The drainage tube 6 serves to remove...is made of soft synthetic resin and has a high flexibility and resiliency. A plurality **of** side holes for **discharging** fluid are provided at the tip portion of the drainage tube 6.
Examples 1 to...

...Company, Ltd.,) (examples 7 to 12) was melted and extruded to form a tubular body **having** an **inner** diameter of 6.1 mm, an outer diameter of 6.6 mm, a thickness of...

...tubular body, two notches 9, shown in Fig. 1, were formed at opposite positions. Then, **two** approximately **linear** tearing lines 8 were formed from notches 9 to the other end of the tubular body by the use of an

ultrasonic cutter (T-[redacted] produced by Nippon Thermonics[redacted]., Ltd.,). Width of the tearing lines 8 was fixed to...

22/5,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00426785
Leak-safe hydrogen/air heat exchanger.
Auslaufsicherer Wasserstoff/Luft-Warmetauscher.
Echangeur de chaleur hydrogene/air protege contre les fuites.
PATENT ASSIGNEE:
ROCKWELL INTERNATIONAL CORPORATION, (256270), 2230 East Imperial Highway, El Segundo California 90245, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
Bond, William H., 452 Van Dyke Avenue, Del Mar, CA 92014, (US)
LEGAL REPRESENTATIVE:
Wagner, Karl H. et al (12561), WAGNER & GEYER Patentanwalte Gewurzmuhlstrasse 5, D-80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 437768 A1 910724 (Basic)
EP 437768 B1 940601
APPLICATION (CC, No, Date): EP 90124622 901218;
PRIORITY (CC, No, Date): US 452133 891218
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: B64G-001/40;
CITED PATENTS (EP A): US 3756024 A; US 2658728 A; US 2658728 A; US 4671351 A; US 3775977 A

ABSTRACT EP 437768 A1
In a heat exchanger system wherein a primary conditioning fluid is reactive with a fluid to be conditioned, a leak safe arrangement of concentric tubes (32,34) disposed across the conditioned fluid flow path having the reactive primary fluid in a central duct surrounded by inert fluid in an outer duct so that single failure leak of primary conditioning fluid or inert fluid presents no risk of harmful reaction with conditioned fluid. (see image in original document)
ABSTRACT WORD COUNT: 78

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	910724	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	920325	A1	Date of filing of request for examination: 911231
Examination:	930421	A1	Date of despatch of first examination report: 930303
Change:	940316	A1	Representative (change)
Grant:	940601	B1	Granted patent
Oppn None:	950524	B1	No opposition filed

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	250
CLAIMS B	(German)	EPBBF1	237
CLAIMS B	(French)	EPBBF1	265
SPEC B	(English)	EPBBF1	2636
Total word count - document A			0
Total word count - document B			3388
Total word count - documents A + B			3388

...CLAIMS Air Collection Enrichment (ACE) propulsion system, said heat exchanger being of the type having
a **plurality of** spaced apart tubes arrayed across said air inlet duct (24), each of said tubes comprising...

...air in said heat exchanger by inert fluid in said annular passageway and said outer **tube** member wherein **said** inert fluid is

nitrogen gas, and [redacted]cluding means for separating ni[redacted]ogen gas **form** the cold air **discharged** from said heat exchanger, and recirculating said nitrogen gas as the inert fluid in said...

22/5,K/7 (Item 7 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00418877
Power apparatus, power transmission/distribution unit, and tripping method therefor
Leistungsapparat, Leistungsubertrager/Verteilereinheit, sowie ein Ausloseverfahren hierfur
Appareil de puissance, unite de transmission de puissance ou de distribution et procede de declenchement a cet effet
PATENT ASSIGNEE:
HITACHI, LTD., (204144), 6, Kanda Surugadai 4-chome, Chiyoda-ku, Tokyo 100, (JP), (applicant designated states: CH;DE;FR;LI;SE)
INVENTOR:
Okumura, Kiyoshi, 9-11, Daiharacho-3-chome, Hitachi-shi, (JP)
Yamagiwa, Tokio, 34-22, Onumacho-3-chome, Hitachi-shi, (JP)
Tagawa, Yoshinori, 2-7, Ayukawacho-3-chome, Hitachi-shi, (JP)
Kawada, Takaaki, 27-4, Higashionumacho-2-chome, Hitachi-shi, (JP)
Fukuoka, Masaru, 18-17, Higashitagacho-3-chome, Hitachi-shi, (JP)
LEGAL REPRESENTATIVE:
Strehl Schubel-Hopf Groening & Partner (100941), Maximilianstrasse 54, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 415370 A1 910306 (Basic)
EP 415370 B1 940309
APPLICATION (CC, No, Date): EP 90116510 900828;
PRIORITY (CC, No, Date): JP 89221484 890830
DESIGNATED STATES: CH; DE; FR; LI; SE
INTERNATIONAL PATENT CLASS: H02B-013/065
CITED PATENTS (EP-A): EP 174905 A; DE 3428322 A; US 4757263 A

ABSTRACT EP 415370 A1
Disclosed is a power apparatus in which there is a fear that a foreign matter in a housing (3) of the apparatus (1) containing an electric conductor (7) therein will be moved in the housing by an action of an electric field so as to induce an abnormality of insulation, the apparatus comprising: a first sensor (12a, 12b) for detecting an existence position of a foreign matter on the basis of a sound of collision of the foreign matter against the housing; a second sensor (13) for detecting partial discharge generated in the housing; and means (16) for receiving respective detection signals of the first and second sensors, judging the existence of insulation abnormality caused by the foreign matter inside the housing, and outputting a result of the judgment.
ABSTRACT WORD COUNT: 133

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 910306 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 910306 A1 Date of filing of request for examination: 901220
Examination: 921028 A1 Date of despatch of first examination report: 920910
Grant: 940309 B1 Granted patent
Oppn: 950125 B1 Opposition 01/941202 Siemens AG; Postfach 22 16 34; D-80506 Munchen; (DE)
Amended: 980318 B2 Maintenance of the European patent as amended
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9812	702
CLAIMS B	(German)	9812	636
CLAIMS B	(French)	9812	828

SPEC B (English) [redacted]812 3029
Total word count - document A 0
Total word count - document B 5195
Total word count - documents A + B 5195

...SPECIFICATION on the earth side where the electric field is lower.
Accordingly, it is possible to **continuously use** the power apparatus while strengthening the watching.
In the case of the corresponding No. 2...

...always know the degree of flashover danger of the apparatus by the intrusion of lightening **or switching serge** even in operating.
In the case of the corresponding No. 4 or 5 in Table 1, on the basis of the detection result, it is possible to **judge** that internal **discharge** is **generated** by a foreign matter adhering on the conductor 7 side at first and then the...

22/5,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00397896
Processes and apparatus for endothermic reactions.
Verfahren und Vorrichtung fur endothermische Reaktionen.
Procedes et appareil pour reactions endothermiques.
PATENT ASSIGNEE:
MANUFACTURING AND TECHNOLOGY CONVERSION INTERNATIONAL, INC., (1199070), P.O. Box 21, Columbia, Maryland 21045, (US), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;NL;SE)
INVENTOR:
Mansour, Momtaz Nosshi, 5442 Marsh Hawk Way, Columbia, Maryland 21045, (US)
Durai-Swamy, Kanda-Swamy, 4812 Konya Drive, Torrence, California 90503, (US)
Warren, David Walter, 4224 Matilija Avenue, Sherman Oaks, California 91423, (US)
LEGAL REPRESENTATIVE:
Harvey, David Gareth et al (31631), Graham Watt & Co. Riverhead, Sevenoaks Kent TN13 2BN, (GB)
PATENT (CC, No, Kind, Date): EP 383565 A1 900822 (Basic)
EP 383565 B1 940504
APPLICATION (CC, No, Date): EP 90301554 900214;
PRIORITY (CC, No, Date): US 310202 890214
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; NL; SE
INTERNATIONAL PATENT CLASS: C10J-003/10; B01J-008/40; F23C-011/04; D21C-011/12; C01B-003/44;
CITED PATENTS (EP A): GB 665723 A; GB 665723 A; WO 8200047 A; FR 2301633 A; GB 644013 A; US 2937500 A

ABSTRACT EP 383565 A1
Resonant tubes of a pulse combustor are immersed in a bed of solid particles in a reaction zone to provide indirect heat from the pulsating combustion gases to the solid particles of the bed. The bed is maintained in an agitated state by a gas or vapor flowing through the bed. Reactant materials are introduced into the agitated bed and undergo reaction at enhanced rates resulting from heat transfer coefficients at least about twice as high as those of steady flow combustors and an intense acoustic pressure level propagated from the pulsating combustor into the reaction zone. The apparatus is useful, for example, to steam reform heavy hydrocarbons and to gasify carbonaceous material, including biomass and black liquor to produce combustible gas at relatively low temperatures, with steam being utilized as the bed fluidizing medium. Black liquor gasification, utilizing sodium carbonate as bed solids, results in liquor energy and chemical content recovery without smelt production.
ABSTRACT WORD COUNT: 159

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 900822 A[redacted] Published application (Alwith S[redacted]rch Report ;A2without Search Report)
Examination: 910206 A1 Date of filing of request for examination: 901212
Examination: 920129 A1 Date of despatch of first examination report: 911216
Grant: 940504 B1 Granted patent
Lapse: 950222 B1 Date of lapse of the European patent in a Contracting State: FR 940930
Lapse: 950315 B1 Date of lapse of the European patent in a Contracting State: BE 940504, FR 940930
Oppn None: 950426 B1 No opposition filed
*Lapse: 950712 B1 Date of lapse of the European patent in a contracting state (rule 92(1)(p)) (change): BE 940504

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1431
CLAIMS B	(German)	EPBBF1	1419
CLAIMS B	(French)	EPBBF1	1719
SPEC B	(English)	EPBBF1	16386
Total word count - document A			0
Total word count - document B			20955
Total word count - documents A + B			20955

...SPECIFICATION found in a conventional fire tube.
The flue gas flow in the resonance tube has **two** velocity **components** . One being the mean flow velocity and the other being an oscillatory component which monotonically...

...configurations suitable for the heat transfer tubes according to the present invention, including a single **straight tube** , **multi - tubes** , U-tube(s), coiled tubes, and shrouded or shielded tubes. The size, shape and number...

...depends upon the heat transfer profile required and the reactor size. In one embodiment, the **products** of combustion are **discharged** through two separate resonance tubes immersed within the reactor. After heat **exchange** from the **tubes to** the bed material, the flue gas streams combine in a plenum or manifold just outside...
...another particularly preferred embodiment, depicted in Figure 3, the resonance zone comprises a single or **multiple tube** 13 having a U-shaped bend near the top of the fluid bed 14 and...feet) wide, 1.5m (5 feet) deep, and 5.4m (18 feet) high. The preferred **multiple** resonance **tube** pulse combustor operation is tandem with aerodynamic valve coupling of each tandem unit 27 for...

22/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00346817
Improved concentric tube ozonator.
Ozonerzeuger mit konzentrischen Rohren.
Ozoniseur a tubes concentriques.
PATENT ASSIGNEE:
HENKEL CORPORATION (a Delaware corp.), (219904), 300 Brookside Avenue, Ambler, PA 19002, (US), (applicant designated states: CH;DE;FR;GB;LI)
INVENTOR:
Staubach, Ernst J., 193 Beech Road, Loveland Ohio 45140, (US)
LEGAL REPRESENTATIVE:
von Kreisler, Alek, Dipl.-Chem. et al (12434), Patentanwalte Von Kreisler-Selting-Werner, Postfach 10 22 41, Bahnhofsvorplatz 1, D-50462 Koln, (DE)
PATENT (CC, No, Kind, Date): EP 350905 A1 900117 (Basic)
EP 350905 B1 930818

APPLICATION (CC, No, Date): EP 89112795 890713;
PRIORITY (CC, No, Date): US 219525 880715
DESIGNATED STATES: CH; DE; FR; GB; LI
INTERNATIONAL PATENT CLASS: C01B-013/11;
CITED PATENTS (EP A): US 3214364 A; DE 2333311 A; US 4049552 A
ABSTRACT EP 350905 A1

A concentric tube ozonator which is designed from theoretical considerations to produce ozone efficiently with minimum electrical power consumption. Concentric tube assemblies in the ozonator are designed for ease of construction and replacement of the components thereof, with each concentric tube assembly providing for the relatively precise positioning of the components therein as is required for proper and efficient operation of the ozonator. Each concentric tube assembly is constructed with an outer tubular metal electrode and an inner tubular metal electrode positioned concentrically within the outer tubular electrode. A glass dielectric tube is positioned concentrically and centrally between the outer and inner tubular electrodes. This construction provides an inner concentric annular electrical field discharge gqp between the glass dielectric tube and the inner tubular electrode, and an outer concentric annular electric discharge gap between the glass dielectric tube and the outer tubular electrode, in which the feed gas is converted into ozone. The efficiency of the ozonator is optimized by constructing the ozonator such that the inner and outer annular discharge gaps are maintained in the range of .45 mm to .55 mm, preferably at .5 mm, to provide a minimum discharge gap to convert oxygen to ozone to minimize the voltages required during operation thereof.
ABSTRACT WORD COUNT: 210

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	900117 A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	900905 A1	Date of filing of request for examination: 900713
Examination:	920708 A1	Date of despatch of first examination report: 920526
Grant:	930818 B1	Granted patent
Oppn None:	940810 B1	No opposition filed

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	526
CLAIMS B	(German)	EPBBF1	479
CLAIMS B	(French)	EPBBF1	568
SPEC B	(English)	EPBBF1	4292
Total word count - document A			0
Total word count - document B			5865
Total word count - documents A + B			5865

...SPECIFICATION is designed from theoretical considerations to produce ozone efficiently with minimum electrical power consumption. In **this** design, concentric **tube** assemblies 10 in the ozonator are designed for ease of construction and replacement of the...

...positioning of the components therein as, is required for proper and efficient operation of the **ozonator** . Within each concentric **tube** assembly, a feed gas **containing** oxygen **is** converted into ozone **in** **inner** 12 and outer 14 concentric annular electrical field **discharge** gaps **formed** therein. Each concentric tube assembly is designed without any wire screens or nets **therein** . Each concentric **tube** assembly is constructed with an outer tubular metal electrode 16 and an inner tubular metal electrode 18 positioned concentrically within the **outer** tubular electrode. The **inner** tubular metal electrode is capped on one end. A glass dielectric **tube** 20 **is** positioned concentrically and centrally between the outer and **inner** tubular electrodes. **This** construction provides **the** **inner** concentric annular electrical field discharge gap 12 between the glass dielectric **tube** and the **inner** tubular electrode, and the outer concentric annular electric discharge gap 14 between the glass dielectric **tube** and the outer tubular electrode, in which the

feed gas is converted i[redacted] ozone.
A...

22/5,K/10 **(Item 10 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

00318944
Coal-moisture control process.
Kohlefeuchtigkeitsregelverfahren.
Procede de regulation de l'humidite du charbon.
PATENT ASSIGNEE:
KAWASAKI JUKOGYO KABUSHIKI KAISHA, (260810), 1-1 Higashikawasaki-cho 3-chome, Chuo-ku Kobe-shi Hyogo-ken, (JP), (applicant designated states: DE;FR;GB;IT)
MITSUI MINING COMPANY, LIMITED, (664450), 1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku Tokyo 103, (JP), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
Nakamura, Akira, 4-4, Higashiasagirigaoka, Akashi-shi, (JP)
Komai, Keiichi, 5-1-516, Oakashicho-2-chome, Akashi-shi, (JP)
Wakabayashi, Takeshi, 2-22-601, Morigocho-2-chome Nada-ku, Kobe, (JP)
Ono, Huminobu, 5-1-724, Oakashicho-2-chome, Akashi-shi, (JP)
Hukunaga, Yoshiaki, Wakore Kasukabe 505 125-1, Oaza Hatchome, Kasukabe-shi, (JP)
Matsuyama, Katsuhisa, Mitsui Kozan Koitoryo 3-24, Koitomachi, Wakamatsu-ku Kitakyushu-shi, (JP)
LEGAL REPRESENTATIVE:
Humphreys, Ceris Anne et al (60161), Abel & Imray Northumberland House 303-306 High Holborn, London WC1V 7LH, (GB)
PATENT (CC, No, Kind, Date): EP 370144 A1 900530 (Basic)
EP 370144 B1 930331
APPLICATION (CC, No, Date): EP 88311041 881122;
PRIORITY (CC, No, Date): EP 88311041 881122
DESIGNATED STATES: DE; FR; GB; IT
INTERNATIONAL PATENT CLASS: F26B-011/04; F26B-003/22; C10B-057/10;
CITED PATENTS (EP A): EP 47509 A; US 3765102 A; DE 611988 C; DE 1023725 B; DE 121763 C; DE 480573 C; DE 1256158 B; DE 481691 C; DE 171740 C; DE 112659 C; EP 44476 A

ABSTRACT EP 370144 A1
A coal-moisture control process, characterized in that a mono species or a mixture of several species of coal containing the volatile matter of 45 wt% or less on the dry ash free basis, including the portion of the particles size of 3 mm or less by 75 wt% or more, and containing the water content of 20 wt% or less on the wet ash free basis is introduced into a plurality of tubes (1) are disposed in and along the axial direction of an inclined rotational cylinder (10) of a coal-in-tube type tube dryer, and a heating medium such as steam is passed along the outer surface of the tubes (1) for the purpose of indirectly heating the coal so as to dry it so that the water content on the wet ash free basis is made 4 to 7 wt%, has enabled efficient and economical moisture control of the coal having relatively high coal rank such as coaking coal.
ABSTRACT WORD COUNT: 164

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 900530 A1 Published application (A1with Search Report ;A2without Search Report)
Examination: 901122 A1 Date of filing of request for examination: 900927
Examination: 910320 A1 Date of despatch of first examination report: 910201
Change: 911227 A1 Representative (change)
Grant: 930331 B1 Granted patent
Oppn None: 940323 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	776
CLAIMS B	(German)	EPBBF1	660
CLAIMS B	(French)	EPBBF1	893
SPEC B	(English)	EPBBF1	5095
Total word count - document A			0
Total word count - document B			7424
Total word count - documents A + B			7424

...SPECIFICATION in the fine particles level as well as by monitoring the quantity of said coal **discharged** from the tube dryer so as to prevent reduction in said quantity of the coal...

...dryer, and that the quantity of supply of the coal to be dried to the **tube dryer** is controlled at **a** substantially constant level.
In one type of coal-moisture control process according to the present ...

...of 20 wt% or less on a wet ash free basis is introduced into a **plurality** of **tubes** disposed along the axial direction of an inclined **rotational** cylinder of a **tube** dryer having stirring means inserted into the tubes, a heating medium such as steam is...

22/5,K/11 (Item 11 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00305055
A power train for vehicles.
Kraftubertragung fur Fahrzeuge.
Mecanisme de transmission pour vehicules.
PATENT ASSIGNEE:
HONDA GIKEN KOGYO KABUSHIKI KAISHA, (237837), 1-1, 2-chome Minami-Aoyama, Minato-ku Tokyo, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
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Koga, Noritaka, 28-13, Sanko-cho, Sakado-shi Saitama-ken, (JP)
Katahira, Kiyoshi, 5-1-5-102, Nakaarai, Tokorozawa-shi Saitama-ken, (JP)
Hojo, Atsuo, 7-12-6, Shakujii-cho, Nerima-ku Tokyo, (JP)
Ito, Toshifumi, 39-6-308, 5041, Oaza Yamaguchi, Tokorozawa-shi Saitama-ken, (JP)
Saito, Mitsuru, 1-8-6, Naka-cho, Koganei-shi Tokyo, (JP)
Nakajima, Yoshihiro, 2-48-2-401, Higashiogu, Arakawa-ku Tokyo, (JP)
Miyazawa, Shinkichi, 1-28-1, Nishiogu, Arakawa-ku Tokyo, (JP)
Yoshida, Yoshihiro, 4-24-13, Akatsuka, Itabashi-ku Tokyo, (JP)
LEGAL REPRESENTATIVE:
Prechtel, Jorg, Dipl.-Phys. Dr. et al (47201), Patentanwalte H. Weickmann, Dr. K. Fincke F.A. Weickmann, B. Huber Dr. H. Liska, Dr. J. Prechtel Kopernikusstrasse 9 Postfach 86 08 20, W-8000 Munchen 86, (DE)
PATENT (CC, No, Kind, Date): EP 323633 A1 890712 (Basic)
EP 323633 B1 920520
APPLICATION (CC, No, Date): EP 88121798 881228;
PRIORITY (CC, No, Date): JP 87332442 871228; JP 88297391 881125; JP 88297393 881125; JP 88297394 881125; JP 88297395 881125; JP 88297398 881125; JP 88297399 881125; JP 88297396 881125; JP 88297397 881125; JP 88297392 881125
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: F16H-039/14; B62M-019/00;
CITED PATENTS (EP A): EP 243004 A; DE 3125123 A; DE 961943 C; DE 1289743 B

ABSTRACT EP 323633 A1
The present invention provides a power train for vehicles, the vehicles having engines. The power train according to the present invention is essentially composed of a swashplate type continuously variable transmission (T) which has (a) a transmission cylinder having an axis and supported rotatable about the axis, a plurality of pump plunger holes and motor plunger holes formed therein parallel to the axis and annularly

about the axis, the transmission cylinder being connected to a crankshaft (17) of the engine to be rotated thereby; (b) a plurality of pump plungers (28) having plunger heads and disposed slidable in respective pump plunger holes so that the plunger heads protrude out of the transmission cylinder, each of the heads having a concavity formed therein; (c) a pump swashplate having an axis and a plurality of projections formed on a surface thereof, the pump swashplate (29) being disposed so that the axis thereof is inclined to the axis of the transmission cylinder and the pump swashplate is rotatable about the axis thereof, the projections of the pump swashplate being received by the respective concavity in the head of the pump plungers (28), whereby the pump plungers pump out a fluid by a reciprocal movement thereof according to rotational movement of the transmission cylinder; (d) a plurality of motor plungers (34) having plunger heads and disposed slidable in respective motor plunger holes so that the heads protrude out of the transmission cylinder, each of the head having a concavity formed therein.

ABSTRACT WORD COUNT: 251

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	890712	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	900228	A1	Date of filing of request for examination: 891227
Examination:	910502	A1	Date of despatch of first examination report: 910314
Grant:	920520	B1	Granted patent
Oppn None:	930512	B1	No opposition filed
Lapse:	970423	B1	Date of lapse of the European patent in a Contracting State: DE 960903, FR 960830, GB 951228

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	955
CLAIMS B	(German)	EPBBF1	937
CLAIMS B	(French)	EPBBF1	1175
SPEC B	(English)	EPBBF1	40733
Total word count - document A			0
Total word count - document B			43800
Total word count - documents A + B			43800

...SPECIFICATION a ball bearing 230b, cylinder block 233 supported, through a ball bearing 232 and to **free** relative **rotation** , at a supporting **tube** 231 bolted at the input **tube** shaft 230. Several pump plungers 235 inserted slidably into an odd number of cylinder holes...

...one terminal of the crankshaft 217, is rotated and driven by the crankshaft 217. The **pump** swash plate 236 **is** **rotated** by the crankshaft 217 by the **rotation** of the input **tube** shaft 230, and gives a reciprocation action to the pump plungers 235 for the purpose...along the imaginary trunnion axis O1 and at a predetermined distance of eccentricity from the **center** of the **input** **tube** shaft 230 (**center** of the output shaft 248). Meanwhile, the second eccentric 258 is held by the cylinder...

...shaft 248. With the continuously variable hydraulic transmission 209 of the said construction, the relative **rotation** , **if** caused between the supporting shaft 231, rotating integrally with the input tube shaft 230, and...

...outside oil route 252, stopping the passage through the inside oil route 251, and sending, **by** pressure **produced** by the pump plunger 235, in operation in the discharge process, hydraulic oil from the...

22/5,K/12 **(Item 12 from file: 348)**

DIALOG(R)File 348:EUROPEAN PATENTS

00270432

CVD method and apparatus.

CVD-Verfahren und Vorrichtung.

Methode et appareil de depot chimique en phase vapeur.

PATENT ASSIGNEE:
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INVENTOR:
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Inujima, Takashi, 1-29-2-204 Morinosato, Atsugi-Shi Kanagawa-Ken 243-01, (JP)
Odakaa, Seiichi, TDK Matsukazeryo A401 58 Kanmuriishishita, Kisakata-Machi Akita-Ken, 018-01, (JP)
Hayashi, Shigenori, Flat Atsugi 201 931-1, Hase, Atsugi-Shi Kanagawa-Ken, 243, (JP)
Hirose, Naoki, Flat Atsugi 205 931-1, Hase, Atsugi-Shi Kanagawa-Ken, 243, (JP)
LEGAL REPRESENTATIVE:
Milhench, Howard Leslie et al (33863), R.G.C. Jenkins & Co. 26 Caxton Street, London SW1H 0RJ, (GB)
PATENT (CC, No, Kind, Date): EP 260097 A1 880316 (Basic)
EP 260097 B1 921209
APPLICATION (CC, No, Date): EP 87307896 870907;
PRIORITY (CC, No, Date): JP 86213323 860909; JP 86213324 860909; JP 86213325 860909; JP 87141050 870605
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: C23C-016/48; C23C-016/50; H01L-021/205;
CITED PATENTS (EP A): EP 149408 A; EP 143479 A; EP 125318 A; EP 30798 A; US 4582720 A; US 4446817 A
CITED REFERENCES (EP A):
PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 10, no. 252, August 29, 1986 THE PATENT OFFICE JAPANESE GOVERNMENT page 92 C 369
PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 10, no. 219, July 31, 1986 THE PATENT OFFICE JAPANESE GOVERNMENT page 68 C 363
PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 10, no. 219, July 31, 1986 THE PATENT OFFICE JAPANESE GOVERNMENT page 68 C 363
PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 10, no. 194, July 8, 1986 THE PATENT OFFICE JAPANESE GOVERNMENT page 135 C 358
PATENT ABSTRACTS OF JAPAN, unexamined applications, C field, vol. 10, no. 194, July 8, 1986 THE PATENT OFFICE JAPANESE GOVERNMENT page 135 C 358;

ABSTRACT EP 260097 A1

An improved CVD (chemical vapour deposition) apparatus (1) for depositing a uniform film comprises a reaction chamber (3), a substrate holder (7) and a plurality of light sources (5) for photo CVD and/or a pair of electrodes (49) for plasma CVD. The substrate holder (7) is a cylindrical multifaceted prism which is encircled by the light sources (5) and/or electrodes (49), and which is arranged to be rotated about its axis during the CVD process by a driving device (9). The apparatus (1) enables substrates (15) mounted on the substrate holder (7) to be uniformly exposed to the CVD enhancement effects of light and/or plasma so that even CVD layers are obtained throughout the surfaces to be coated.

ABSTRACT WORD COUNT: 122

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	880316	A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	881102	A1	Date of filing of request for examination: 880907
Examination:	900321	A1	Date of despatch of first examination report: 900207
Grant:	921209	B1	Granted patent
Oppn None:	931201	B1	No opposition filed

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	977
CLAIMS B	(German)	EPBBF1	550
CLAIMS B	(French)	EPBBF1	689
SPEC B	(English)	EPBBF1	2543
Total word count - document A			0
Total word count - document B			4759
Total word count - documents A + B			4759

...CLAIMS cylindrical substrate holder (7) is hollow and heating means (23) are provided within the hollow **interior** of the substrate **holder** for heating substrates held thereby.

10. The apparatus of any preceding claim wherein the means...

...relationship relative to the light sources (19) of the substrate holder (7) comprises means for **rotating** the **substrate** holder (7) in the apparatus.

11. The apparatus of any preceding claim wherein the substrate holder (7) and the light sources (19) are **coaxially** arranged and the means (21) is arranged to effect relative rotation about said axis between the substrate holder (7) and the light **sources** (19).

12 . The apparatus of claim 10 or 11 wherein means are provided for modulating the intensity of the light output of said plurality of light **sources** (19) **in** synchronisation with relative rotation between the substrate holder (7) and the light sources (19) whereby ...

22/5,K/13 (Item 13 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

00255607

Tampon applicator.

Tamponapplikator.

Applicateur de tampon.

PATENT ASSIGNEE:
Tambrands Inc., (879340), One Marcus Avenue, Lake Success New York 11042, (US), (applicant designated states: ES;FR;GB)

INVENTOR:
Sanders, Irl R., III, 26 Brainard Road, Wilbraham Massachusetts 01095, (US)

LEGAL REPRESENTATIVE:
Fuchsle, Klaus, Dipl.-Ing. et al (3971), Hoffmann . Eitle & Partner Patentanwalte Arabellastrasse 4, W-8000 Munchen 81, (DE)

PATENT (CC, No, Kind, Date): EP 252381 A2 880113 (Basic)
EP 252381 A3 880420
EP 252381 B1 920108

APPLICATION (CC, No, Date): EP 87109202 870626;

PRIORITY (CC, No, Date): US 879140 860626

DESIGNATED STATES: ES; FR; GB

INTERNATIONAL PATENT CLASS: A61F-013/32;

CITED PATENTS (EP A): US 4479791 A; BE 836423 A; GB 561173 A; FR 2072411 A; US 3543754 A; FR 2437827 A

ABSTRACT EP 252381 A2

A shortened tampon applicator (108) of the telescoping tube type employs an ejector tube (126) to store a tampon (140) it its distal end (112) and an outer tube (110) disposed by a slip fit thereover to thus shorten the overall length of the tampon and applicator (108) assembly. Directionally-locking inward flaps (122) fixed within the distal (112) end of said outer tube (110) engage the distal end (112) of the tampon (140) stored in the ejector tube (126) thus securing the latter relative to said outer tube (110) while permitting only distal expulsion therefrom. The ejector tube (126) preferably has inwardly biased flexible portions at its distal end (128) which serve to catch behind the proximal end of the tampon (140). In the preferred version, the inwardly biased portions are unique undulations at the blunt distal end (128) of the

ejector tube (126) which advantageously cooperatively functions with a tampon (140) having an enlarged tail.
ABSTRACT WORD COUNT: 157

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 880113 A2 Published application (A1with Search Report ;A2without Search Report)
Search Report: 880420 A3 Separate publication of the European or International search report
Examination: 881207 A2 Date of filing of request for examination: 881013
Examination: 900919 A2 Date of despatch of first examination report: 900803
Grant: 920108 B1 Granted patent
Oppn None: 921230 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	2313
CLAIMS B	(German)	EPBBF1	1397
CLAIMS B	(French)	EPBBF1	1459
SPEC B	(English)	EPBBF1	6032
Total word count - document A			0
Total word count - document B			11201
Total word count - documents A + B			11201

...SPECIFICATION by undulations 130, and thus urged out the distal discharge end 112 of the outer **tube 110** .
As shown in Figs. 3 and 6, the distal or base end of the tampon...
...serving as an unidirectional lock to prevent the tampon 140 from re-entering the ejector **tube** 126 during expulsion.
Applicant has discovered that an even more reliable and effective alternative to...

22/5,K/14 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00485981 **Image available**
DEVICE AND METHOD FOR TREATING THE INSIDE SURFACE OF A PLASTIC CONTAINER WITH A NARROW OPENING IN A PLASMA ENHANCED PROCESS
DISPOSITIF ET PROCEDE POUR LE TRAITEMENT, DANS UN PROCEDE ACTIVE PAR PLASMA, DE LA SURFACE INTERIEURE D'UN RECIPIENT EN PLASTIQUE PRESENTANT UNE OUVERTURE ETROITE
Patent Applicant/Assignee:
TETRA LAVAL HOLDINGS & FINANCE S A,
LAURENT Jacques,
FAYET Pierre,
DEVIDAL Robert,
Inventor(s):
LAURENT Jacques,
FAYET Pierre,
DEVIDAL Robert,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9917333 A1 19990408
Application: WO 98IB1505 19980928 (PCT/WO IB9801505)
Priority Application: CH 972290 19970930
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **H01J-037/32**
International Patent Class: C23C-016/04
Publication Language: English
Fulltext Availability:

Detailed Description
Claims
Fulltext Word Count: 4199

English Abstract
The described device is introduced into a plastic container with a narrow opening and serves a plasma enhanced process for treating the inside surface of the container. The device (2) extends between the container opening and the container bottom along the container axis (X) and comprising a gas feed tube (23) for feeding a process gas into the container and permanent magnets (24) for establishing a stationary magnetic field inside the container. The magnets (24) form a column of superimposed magnets which is arranged inside the gas feed tube (23). The north and south poles of each magnet are positioned on opposite sides of the container axis (X). The device may also comprise cooling means (25) for cooling the gas feed tube and the magnets. Preferably the plasma used in the plasma enhanced process is sustained by microwaves or radio frequency waves and the magnets (24) are preferably designed such that electron-cyclotron-resonance conditions are established in an area distanced from the container inner surface by 0 to 30 mm.

French Abstract
On introduit le dispositif de l'invention dans un recipient en plastique ayant une ouverture etroite, puis on l'utilise pour la mise en oeuvre d'un procede active par plasma pour le traitement de la surface interieure dudit recipient. Ledit dispositif (2) s'etend entre l'ouverture du recipient et le fond de ce dernier, le long de l'axe (X) dudit recipient, et comprend un tube d'alimentation en gaz (23) qui envoie un gaz de traitement dans le recipient ainsi que des aimants permanents (24) qui creent un champ magnetique stationnaire a l'interieur du recipient. Les aimants (24) forment une colonne d'aimants superposes, placee a l'interieur du tube d'alimentation en gaz (23). Les poles sud et nord de chaque aimant sont positionnes sur les cotes opposes de l'axe (X) du recipient. Ledit dispositif peut egalement presenter un moyen de refroidissement (25) qui refroidit le tube d'alimentation en gaz et les aimants. Le plasma utilise dans le procede active par plasma est, de preference, maintenu par des hyperfrequences ou des radiofrequences, et les aimants (24) sont de preference concus de maniere que des conditions de resonance cyclotron-electron soient creees dans une zone situee a une distance comprise entre 0 et 30 mm par rapport a la surface interieure du recipient.

Main International Patent Class: **H01J-037/32**
Fulltext Availability:
Detailed Description

Detailed Description
... cooling medium.

The cooling medium W is fed to the cooling tube through e.g. **two** feed **tubes** 25.2 extending from the connecting end of the device and having open ends in the area of the closed distal end of the cooling tube. The cooling medium is
removed from the cooling **tube** in the area of the connecting end of the
device. The cooling tube 25.1 with the magnets arranged within is arranged **inside** the gas feed **tube** 23.
- 10 As an example for a plasma enhanced process for treating the inside surface...

22/5,K/15 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00290032 **Image available**
A SYSTEM FOR ANALYZING SURFACES OF SAMPLES
SYSTEME PERMETTANT D'ANALYSE DES SURFACES D'ECHANTILLONS

Patent Applicant/Assignee:
BIOTECHNOLOGY RESEARCH AND DEVELOPMENT CORPORATION,
THE PENN STATE RESEARCH FOUNDATION,
Inventor(s):
WEISS Paul S,
STRANICK Stephan J,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9508181 A2 19950323
Application: WO 94US10314 19940912 (PCT/WO US9410314)
Priority Application: US 93120560 19930913
Designated States: JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **H01J-037/20**
International Patent Class: G01N-27:00
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 8070

English Abstract
A system for transporting in a vacuum chamber sample holders and samples between a holder tray and a location for use with a surface analytical instrument is disclosed. Also provided is a system including a microwave coaxial cable connecting the tip terminal of a scanning tunneling microscope to a microwave signal source and a system for clamping a heater to a sample holder in order to heat the sample.

French Abstract
Systeme permettant de transporter dans une chambre a vide des porte-echantillons et des echantillons entre un bac a porte-echantillons et un site ou lesdits echantillons seront soumis a un instrument d'analyse de surface. Un systeme qui comporte un cable coaxial pour hyperfrequences connectant la borne en pointe d'un microscope a effet tunnel a une source de signaux hyperfrequence et un systeme destine a fixer par serrage une unite de chauffage sur un porte-echantillon de maniere a chauffer ledit echantillon sont egalement decrits.

Main International Patent Class: **H01J-037/20**
Fulltext Availability:
Detailed Description

Detailed Description
... semi-rigid coaxial cable 302 (and 301 in Fig. 12) *
These coaxial cables are terminated **inside** concentric **tubes** 310, 312 where the **inner tube** 310 also acts as tip or bearing holder and sample connection. The microwave coaxial cable 302 has a small section of outer **tube** shielding 304 **removed** . A smaller section of Tef lon insulation 306 is also removed to expose the **center conductor** 308, In this way, the **center conductor** 308 mates with and is in electrical contact with the **inner tube** 310 while the outer conductor 304 mates with and is in electrical contact with the...

...The extension of the insulation 306 from the outer shield of the cable past the **inner tube** prevents accidental grounding between the **inner tube** and the cable shielding, In ref erence to Figs, 12, 13, f or the center piezo assembly, the STM tip terminal 344 is placed in the **coaxial tube** 310 that is housed in the center piezo assembly or scanner, The other **coaxial tube** is housed in one of the three peripheral piezo assemblies that make up the tripod...

22/5,K/16 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00287962 **Image available**

SYSTEM USING TUBULAR PHOTOBIOREACTORS FOR THE INDUSTRIAL CULTURE OF PHOTOSYNTHETIC MICROORGANISMS

SYSTEME METTANT EN OEUVRE DES REACTEURS PHOTOBIOLOGIQUES TUBULAIRES DANS LA CULTURE A L'ECHELLE INDUSTRIELLE DE MICRO-ORGANISMES PHOTOSYNTHETIQUES

Patent Applicant/Assignee:
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TREDICI Mario Roberto,
CHINI ZITTELLI Graziella,
BIAGIOLINI Silvia,
CAROBBI Renato,
FAVILLI Francesco,
MANNELLI Domenico,
PINZANI Edoardo,
Inventor(s):
TREDICI Mario Roberto,
CHINI ZITTELLI Graziella,
BIAGIOLINI Silvia,
CAROBBI Renato,
FAVILLI Francesco,
MANNELLI Domenico,
PINZANI Edoardo,

Patent and Priority Information (Country, Number, Date):
Patent: WO 9506111 A1 19950302
Application: WO 94IT140 19940825 (PCT/WO IT9400140)
Priority Application: IT 93FI167 19930827
Designated States: AU BB BG BR BY CA CN CZ FI HU JP KP KR KZ LK LV MG MN MW NO NZ PL RO RU SD SI SK TT UA US UZ VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: C12M-001/00
International Patent Class: C12M-01:04
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 5154

English Abstract

The bioreactor - for the production of cultures of photosynthetic microorganisms or plant cells dispersed in nutrient-containing aqueous solutions - comprises reaction tubes (31) that are essentially transparent to solar radiation and lie at a shallow angle, generally of between 2degrees and 6degrees, to the horizontal, between two collectors (35, 43) at different levels; a nozzle (36A, 36B) is provided at the lower end of each tube (31) to blow in air (or the like) in an alternating manner as a propellant to carry the culture upwards and to remove toxic gases generated by the photoreactions; some of the tubes (31), acting alternately, return the culture from the upper collector (43) to the lower collector (35); the in-blown gas and the gas produced by the culture is removed or optionally recovered from the upper collector (43).

French Abstract

Bioreacteur destine a la production de cultures de micro-organismes photosynthetiques ou de cellules vegetales dispersees dans des solutions aqueuses renfermant des substances nutritives. Ce reacteur comporte des tubes reactionnels (31) essentiellement transparents vis-a-vis du rayonnement solaire et formant un angle tres faible, generalment compris entre 2degrees et 6degrees, avec l'horizontale, lesdits tubes s'etendant entre deux capteurs (35, 43) situes a des hauteurs differentes. Une buse (36A, 36B) est prevue a l'extremite inferieure de chaque tube (31) et destinee a insuffler en alternance de l'air (ou analogue) servant de gaz vehicule portant la culture vers le haut et evacuant les gaz toxiques engendres par les photoreactions. Certains tubes (31), agissant en alternance, renvoient la culture du capteur superieur (43) vers le capteur inferieur (35), et le gaz insuffle ou produit par la culture est

evacue ou eventuellement recupere au niveau du capteur superieur (43).

Fulltext Availability:
Detailed Description

Detailed Description
... tubes 51 are arranged at equal intervals and with two opposing slopes from a lower **middle** area; **two** opposing **tubes** can be formed by a single catenary tube, the average inclinations being approximately as described...

...in odd numbered positions (or vice versa); it is thus possible to have reverse flows **moving** continuously in adjacent **tubes** 51.

With a single distributor @55 or 57) always active, the f low along a...

22/5,K/17 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00261369
PRE-IONIZER FOR A LASER
PRE-IONISATEUR POUR LASERS
Patent Applicant/Assignee:
CYMER LASER TECHNOLOGIES,
Inventor(s):
LARSON Donald G,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9409536 A1 19940428
Application: WO 93US9491 19931005 (PCT/WO US9309491)
Priority Application: US 92922 19921009
Designated States: CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: H01S-003/038
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 11035

English Abstract
An anode (14) and a cathode (16) in a laser (10) are spaced in a first direction. A voltage difference between these members **produces** an electrical **discharge** which ionizes gases (18) in the laser (10) to react chemically and produce coherent radiation. First and **second** **tubes** (22) made from a dielectric material are spaced in the laser (10) in a second direction transverse (preferably perpendicular) to the first direction. The anode (14), the cathode (16) and the tubes (22) extend through the laser (10) in a direction transverse (preferably perpendicular) to the first and second directions. The tubes (22) are preferably at least a 99.9 % pure polycrystalline aluminum oxide ceramic with traces of other metallic elements than aluminum. Bushings (24) made from a material homogenous (preferably identical) to the tube material are integral with the tube (22) near the opposite tube ends. First electrical conductors (30) extend through the tubes (22). **Second** electrical **conductors** (32) (preferably resilient) contact (preferably line contact) the external tube surfaces to define capacitors with the first conductors (30) and the tube material. Positioning members (36) **movably** engage the **tube** external surfaces near the tube ends in co-operation with the resilient members establishing three (3) - line contacts with the tubes (22) for positioning the tubes (22) precisely in the cavity (1). When a voltage pulse is applied between the first **conductor** (30) **inside** each **tube** (22) and the conductors (32) on such tube (22), the resultant corona discharge from the external tube surface

produces ultraviolet li[redacted] which pre-ionizes the gases (1[redacted] in the cavity (12). This facilitates t[redacted] ionization of the gases (18) i[redacted] the cavity (12) when an anode (14)-cathode (16) electrical **discharge** is **produced** .

French Abstract

On installe une anode (14) et une cathode (16) dans un laser de maniere a ce qu'elles soient espacees dans une premiere direction. Une difference de potentiel entre ces elements provoque une decharge electrique qui ionise les gaz (18) du laser (10), les fait reagir chimiquement et engendre des radiations coherentes. Des premiers et deuxieme tubes (22) en matiere dielectrique sont installes dans le laser avec un espacement dans une deuxieme direction, transversalement (de preference perpendiculairement) a la premiere direction. L'anode (14), la cathode (16) et les tubes (22) s'etendent a travers le laser (10) transversalement (de prefence perpendiculairement) aux premiere et deuxieme directions. Les tubes (22) sont fabriques de preference a partir d'une matiere ceramique polycristalline d'oxyde d'aluminium ayant une puretee de 99,9%, avec des traces d'elements metalliques autres que l'aluminium. Des manchons (24) realises dans une matiere homogene (et de preference identique) a celle du tube sont solidaires du tube (22) pres des extremites opposees de celui-ci. Des premiers conducteurs electriques (30) traversent les tubes (22). Des deuxiemes conducteurs electriques (32) (de preference elastiques) sont mis en contact (de preference en contact de ligne) avec les surfaces externes des tubes pour definir des condensateurs avec les premiers conducteurs (30) et la matiere du tube. Des elements de positionnement (36) viennent en contact mobile avec les surfaces externes des tubes pres des extremites des tubes en cooperation avec les elements elastiques pour etablir trois (3) contacts de ligne avec les tubes (22) pour le positionnement precis des tubes (22) dans l'enceinte (1). Lorsqu'une impulsion de tension est appliquee entre le premier conducteur (30) dans chacun des tubes (22) et les conducteurs (32) de ce tube (22), la decharge a effet corona provenant de la surface externe du tube cree une lumiere ultraviolette, qui preionise ainsi les gaz (18) de l'enceinte (12). L'ionisation des gaz (18) de l'enceinte est ainsi favorisee lors de la production d'une decharge anode (14) - cathode (16).

English Abstract

...a laser (10) are spaced in a first direction. A voltage difference between these members **produces** an electrical **discharge** which ionizes gases (18) in the laser (10) to react chemically and produce coherent radiation. First and **second tubes** (22) made from a dielectric material are spaced in the laser (10) in a second...

...22) near the opposite tube ends. First electrical conductors (30) extend through the tubes (22). **Second** electrical **conductors** (32) (preferably resilient) contact (preferably line contact) the external tube surfaces to define capacitors with the first conductors (30) and the tube material. Positioning members (36) **movably** engage the **tube** external surfaces near the tube ends in co-operation with the resilient members establishing three...

...22) precisely in the cavity (1). When a voltage pulse is applied between the first **conductor** (30) **inside** each **tube** (22) and the conductors (32) on such tube (22), the resultant corona discharge from the...

...of the gases (18) in the cavity (12) when an anode (14)-cathode (16) electrical **discharge** is **produced** .

22/5,K/18 (Item 5 from file: 349)

00255761 **Image available**

PULSE GENERATOR

GENERATEUR D'IMPULSIONS

Patent Applicant/Assignee:

CORREA Paulo N,
CORREA Alexandra N,
Inventor(s):
CORREA Paulo N,
CORREA Alexandra N,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9403918 A1 19940217
Application: WO 93CA311 19930730 (PCT/WO CA9300311)
Priority Application: CA 2074989 19920730
Designated States: AT AU BB BG BR BY CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: H01J-017/06
International Patent Class: H01T-09:00
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 18786

English Abstract
A cold cathode vacuum discharge tube (50) is used in a circuit for generating pulsed auto-electronic emissions which are particularly intense and frequent in the abnormal glow discharge region. The discharge tube is characterized by a large electrode area at least of the cathode, and a large interelectrode gap. The electrodes preferably have a surface area of 16 cm2 or more and they are preferably spaced at least 3 cm apart in a parallel relationship on each side of an excitor probe which is centered between them. In another configuration the probe forms the anode and the plates are cathodes. The circuit is driven from a direct current source of impedance sufficient to prevent establishment of a vacuum arc discharge.

French Abstract
On utilise un tube a vide a decharge (50) a cathode froide dans un circuit pour generer des emissions pulsees autoelectroniques particulierement intenses et frequentes dans la region de decharge luminescente anormale. Le tube a decharge est caracterise par une zone d'electrodes importante, au moins de la cathode, ainsi que par un espace interelectrode important. Les electrodes presentent, de preference, une surface d'au moins 16 cm2 et elles sont, de preference, espacees d'au moins 3 cm en relation parallele de chaque cote d'une sonde d'excitation centree entre elles. Dans une autre configuration, la sonde constitue l'anode et les plaques sont des cathodes. Le circuit est excite a partir d'une source de courant continu, dont l'impedance est suffisante pour empecher la creation d'une decharge d'arc dans le vide.

Fulltext Availability:
Claims

Claim
... gap
remained constant, Using those pressure intervals, and the actual voltages observed for the other **two** discharge **tubes** 5 (64 CM2 and 128 cm2, vertical column 7, Table 4), the experimentally observed voltage...test the effect of 5 increasing the electrode plate area in the design of a **discharge** tube 50 **made** use of glass housings 52 enclosing a final vacuum of 2 * 10-6 Torr obtained...

...128 and 256 cm2, At a seal off vacuum of 2 10-6Torr, the first **two** discharge **tubes** 50 tested in this series (16 and 64 cm2. device #Is 7 to 10) remained...can thus summarize these predictions as: given a linear factor kL between "all and '1b", **two** vacuum **tubes** will have the same breakdown voltage if the pressure of '1b" decreases by 1/kLI...

...where E = electrical
field strength) both remain constant, Essentially, as the
area factor between the **two** discharge **tubes** is kA = kL 2
both the charge density r and the current density J should...upon an
abnormal glow
discharge pulse, the recovery of the field strength within
these discharge **tubes** overshoots a 'closed **switch** state'
(where the current I approaches zero) and results in a net
flow of positive...single half-length rigid rod or a pair of axial probes
62
separated at the **center** of the discharge **tube** 50 by a gap
of more than 1 cm, 4-6 cm being optimum. Whereas...

...yielding to a direct
mechanical transduction of the electrodynamic force
effected upon it by the **discharge** or to force **created** by
the acquisition of a constant space charge, A split axial
probe 62 facilitates the...

22/5,K/19 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00138169
HYDROTHERAPY MASSAGE METHOD AND APPARATUS
PROCEDE ET DISPOSITIF D'HYDROTHERAPIE
Patent Applicant/Assignee:
HENKIN Melvyn Lane,
LABY Jordan Myron,
Inventor(s):
HENKIN Melvyn Lane,
LABY Jordan Myron,
Patent and Priority Information (Country, Number, Date):
Patent: WO 8703029 A1 19870521
Application: WO 86US2337 19861030 (PCT/WO US8602337)
Priority Application: US 85987 19851112
Designated States: AT AU BE CH DE DK FR GB IT JP LU NL SE
Main International Patent Class: E03D-011/10
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 16844
English Abstract
A hydrotherapy method and apparatus (100) for discharging a fluid stream through an opening (134) in the wall (130) of a water tub (120), while concurrently translating the stream, to impact against and massage the body of a user (114).

French Abstract
Procede et dispositif d'hydrotherapie (100) permettant de decharger un jet de fluide a travers une ouverture (134) dans la paroi (130) d'un bassin d'eau (120), tout en provoquant le deplacement du jet, en le dirigeant contre le corps d'un utilisateur (114) afin de pratiquer un massage.

Fulltext Availability:
Claims

Claim
... air can be mixed at the supply end of the flexible
tube or, alternatively, a **dual** passage **tube** can be used
with mixing occurring adjacent to the nozzle. In
either case, either a...e.g. ball in socket)
at its supply end. The swivel joint enables the rigid
tube to **rotate** about its axis as the nozzle coupled to
the tubes discharge end travels along the...of the tube 210.

As pressurized water flows through tube 210, it exits at the **discharge** end 2[illegible] and **produces** a reduced pressure, by venturi action, which draws air into the passage 222 from the...and air supply sources to the nozzle means. More specifically, Figure 14 depicts a rigid **tube** 500 defining a **central** passageway 502. As shown in Figure 16, the tube 500 is open at it's...

?

Hassanzadeh 09/625,200

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=> d query
L1        33563 SEA FILE=HCA (DISCHARG? OR PLASMA)(3A)(GENERAT? OR SOURCE?)
L2        33350 SEA FILE=HCA (DISCHARG? OR PLASMA)(3A)(PRODUC? OR PROD# OR
                CREAT?)
L3        50422 SEA FILE=HCA (DISCHARG? OR PLASMA)(3A)(FORM## OR FORMING? OR
                FORMAT? OR MAKE# OR MADE# OR MAKING# OR SYNTHESI? OR PREPAR?
                OR PREP# OR PRPN#)
L4       689382 SEA FILE=HCA TUBE# OR COND OR CONDUCTOR?
L5        22302 SEA FILE=HCA L4(3A)(INNER? OR INSIDE? OR CENTRAL? OR CENTER?
                OR CENTRE? OR INTERIOR? OR INTERNAL? OR INMOST? OR MIDDLE?)
L6         2717 SEA FILE=HCA L4(3A)(DISPLAC? OR MOVAB? OR MOVE# OR MOVING OR
                SHIFT? OR SLID? OR MOBILE? OR REPOSITION? OR RE(W)POSITION? OR
                REARRANG?)
L7        17117 SEA FILE=HCA L4(3A)(RE(W)ARRANG? OR ADJUST? OR REPLAC? OR
                ROTAT? OR REMOV? OR INTERCHANG? OR EXCHANG? OR SWITCH? OR
                WITHDRAW?)
L8          251 SEA FILE=HCA L4(3A)('WITH'(W)DRAW? OR EXTRACT?)
L9          544 SEA FILE=HCA (L1 OR L2 OR L3) AND L5
L10         173 SEA FILE=HCA (L1 OR L2 OR L3) AND (L6 OR L7 OR L8)
L11          36 SEA FILE=HCA L9 AND L10
L12          32 SEA FILE=HCA L11 NOT 2001-2002/PY
L13        4107 SEA FILE=HCA (CO(W)AXIAL? OR COAXIAL? OR MULTIPLE? OR TWO OR
                PAIR? OR MANY OR MULTI OR SEVERAL OR NUMEROUS OR PLURAL? OR
                NUMBER)(1W)L4
L14        2327 SEA FILE=HCA (SECOND OR DOUBLE OR DUAL OR TWIN)(1W)L4
L15           1 SEA FILE=HCA L12 AND (L13 OR L14)


=> d cbib abs l15 1

L15  ANSWER 1 OF 1  HCA  COPYRIGHT 2002 ACS
17:3852  Original Reference No. 17:689h-i,690a-i,691a  Production of nitrogen
     oxides and ozone by high-voltage discharges.  McEachron, K. B.; George, R.
     H.  Bull. Purdue Univ., 6, 1-189 (Unavailable) 1922.
AB   The corona discharge has been used in the production of O3, but its
     technical use for the fixation of atm. N has been prohibited by the low
     concns. of N oxides obtained.  Spiel (Thesis, Techn. High School, Vienna,
     1909) obtained as much as 5.6% of NO in air confined in a Siemens tube,
     and the original purpose of the present work was to apply Spiel's
     conclusions to a tube using moving air and obtain
     satisfactory yields of N oxides.  Expts. with the Siemens type of tube
     confirmed the results of Spiel.  Under the influence of the discharge a
     decrease in the pressure of the enclosed air occurred.  After a time this
     decrease reached a max. and reversed.  The yield of NO was always greater
     near the reversal point than after the pressure had increased to the
     initial value.  In case the air in the tube had been in contact for a
     considerable time with other air, even in minute quantities, which had
     been previously subjected to elec. discharge, the pressure decrease was
     modified or eliminated altogether, the pressure rising instead of falling.
     Such contamination affected the appearance of the discharge, decreased the
     yield and under certain conditions prevented the formation of any
     absorbable products.  It was not possible in most cases to account for the
     total pressure decrease on the basis of the amt. of O3 and NO found, and
     therefore, the formation of some heavy mol. is suspected.  As a rule the
     pressure did not decrease more than 60 mm.  A corona discharge
     could be produced in fresh air at a lower voltage than in air
     that previously had been subjected to elec. discharge.  Rod-type tubes
     were constructed by filling the annular space between 2 concentric glass
     tubes with glass rods.  This kind of tube gives a uniform
     discharge without the formation of sparks.  In one of
     these tubes (inside diam. of the annular space 2.4
     cm., outside diam. 4.5 cm., and length 71 cm.) increasing the air velocity
     reduced the concn. of both N oxides and ozone but increased up to certain
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limits the yield per kw.-hr. The yields were better at 31 cycles than at 61 cycles. At 31 cycles 56.7 g. of O3 per kw.-hr. with a concn. of 5.6 g. per cu. m. were obtained. A porcelain tube of 10.1 cm. outside and 7.6 cm. inside diam. was surrounded by a 15.2-cm. At tube and contained a 5-cm. At tube concentrically located. The spaces between the **two** Al **tubes** and the porcelain tube were filled with glass rods 0.63 cm. in diam. With this app. the highest yields of nitric acid were obtained at a current of 10 milliamps. The yield increased to a practically const. value at flow rates above 5 l. per min. With decrease in pressure (from 845 to 400 mms.) the yield of O3 decreased and that of NO increased. With an air flow of 19.9 l. per min., a pressure of 845 mm., and a current of 10 milliamps., the yield of ozone was 66 g. per kw.-hr. with a concn. of 6.5 g. per cu. m. and the yield of HNO3 was 2.9 g. per kw.-hr. with a NO concn. of 0.0139%. A 5-hr. run showed that some form of cooling would probably be necessary to prevent a decrease in yield owing to increased temp. A large single dielec. tube consisted of an Al rod (1.59 cm. in diam.) surrounded by a porcelain **tube** (7.6 **inside** diam. and 10.1 cm. outside diam.) which in turn was surrounded by an Al tube 14.4 cm. in diam., all parts being concentrically located. The active length of this tube was approx. 152 cm. The air passed down through the space between the Al and porcelain tubes and up through the **inside** of the porcelain **tube**. This app. gave a mixed discharge consisting of corona with a large number of static sparks, which decreased in number and length with decreasing pressure, until at 560 mms. they appeared for only a very short distance out from the Al rod. With an increase in air velocity at pressures slightly above the atmosphere, the yields increased rapidly, a peak being formed at an air flow rate of about 6 l. per min. In this app. the yield of N oxides decreases and that of O3 increases with increasing pressure. At the point of max. yield of nitric acid, cyclic variations in the meter readings and manometer variations some times as great as 1 to 2 cm. of Hg take place. During the run a white fog containing nitric acid appears over the absorbing liquid. Tests on a tube in which the corona discharge was replaced by a spark discharge between two Al wires gave a concn. of NO as much as 3.87 vol. % at an air velocity of 0.0187 l. per min. Very small amts. of O3 are produced by this type of discharge. An apparatus of the rod type, if properly cooled, gives yields of O3 of sufficient magnitude, so that the tube becomes of importance as a commercial ozonizer. The yields of NO per kw.-hr. were in all cases small compared to those obtained by the use of the commercial are process.

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=> s l12 not l115
L16         32 L12 NOT LL15

=> s l12 not l15
L17         31 L12 NOT L15

=> d cbib abs l17 1-31

L17  ANSWER 1 OF 31  HCA  COPYRIGHT 2002 ACS
132:188600  Method and apparatus for plasma treatment of inside and conductive
     surface of tube.  Baba, Tsuneakik; Fujiyama, Hiroshi (Nagasaki Prefecture,
     Japan).  Jpn. Kokai Tokkyo Koho JP 2000064040 A2 20000229, 6 pp.
     (Japanese).  CODEN: JKXXAF.  APPLICATION: JP 1998-247820 19980817.
AB   The title method involves placing the tube in a vacuum container,
     introducing a source gas for generating desired ions into the container
     kept at a low pressure, forming a plasma in the tube
     by microwave or high-frequency discharge, placing a means of generating
     magnetic lines in the direction of the tube, and applying a pulsed neg.
     potential to the tube to withdraw possible. ions into
     the tube.  An app. for carrying out the above method is also described.  .
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L17 ANSWER 2 OF 31 HCA COPYRIGHT 2002 ACS
130:345583 Polymer etching and deposition of amorphous silicon using a VHF coaxial helix **plasma source**. Stephan, U.; Richter, K.; Kuske, J.; Gunzel, R. (Semiconductor and Microsystems Technology Laboratory, Dresden University of Technology, Dresden, D-01062, Germany). Surface and Coatings Technology, 112(1-3), 384-388 (English) 1999. CODEN: SCTEEJ. ISSN: 0257-8972. Publisher: Elsevier Science S.A..
AB Coaxial helical resonators are used in the field of high-frequency engineering. Their favorable geometric construction suggests their utilization as a **plasma source** for etching and deposition. The **plasma source** consists of a cylindrical outer conductor, closed on one side, and a **rotationally** sym. **inner conductor** of spiral form (helix) measuring one-quarter of the wavelength of the r.f. Using the elec. and outer magnetic fields of the helical resonator, the **plasma** is **generated** within the resonator and above its open end. Copper-laminated polyimide foils were patterned (6-12 Pa pressure, O2/CF4 atmosphere: 20% CF4 in O2, 100 sccm gas flow, r.f.: 40.68 MHz 200 W, r.f. bias: 13.56 MHz 300 W). The distance between the **plasma source** and the polymer varied from 50 to 150 mm. The polymer thickness was 50 .mu.m, and this was masked by a 5-.mu.m copper layer. Etch rates of up to 1.65 .mu.m min-1 were obtained. Deposition expts. of amorphous silicon (25-400 sccm silane flow, 1000 sccm helium flow for diln., 6-20 W r.f., 20-40 Pa pressure, no r.f. bias, 350 .degree.C substrate temp.) resulted in deposition rates of 3.6-10 .mu.m h-1. The max. thickness uniformity error was 5%.

L17 ANSWER 3 OF 31 HCA COPYRIGHT 2002 ACS
130:289490 Plasma CVD (chemical vapor deposition) apparatus with detachable plate. Amano, Shunji; Hayashi, Hiroshi (Sony Corp., Japan). Jpn. Kokai Tokkyo Koho JP 11106923 A2 19990420 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-275496 19971008.
AB The inner surface of a reaction tube in the app. is covered with a detachable plate. **Plasma** is **generated** in the reaction **tube** and its **inner** surface is contaminated. The reaction **tube** is cleaned by **replacing** a contaminated plate by a new one.

L17 ANSWER 4 OF 31 HCA COPYRIGHT 2002 ACS
130:184187 Development and study of an energy-conserving rotor-type centrifugal mill with inertial-gravitational **discharge** of the final **product**. Levdanskii, E. I.; Lavdanskii, A. E.; Garabazhiu, A. A. (Beloruss. Tekhnol. Univ., Belarus). Khimicheskaya Promyshlennost (Moscow) (9), 581-584 (Russian) 1998. CODEN: KPRMAW. ISSN: 0023-110X. Publisher: Izdatel'stvo "TEZA".
AB A centrifugal mill with inertial-gravitational **discharge** of the final **product** consists of hopper, plate, elec. motor, disk, blade, lid, feeding **tube**, deflector, air **removing** **tube**, and **inner** cylindrical shell. The mill can be used for fine grinding of materials of low and av. strength (e.g., lime, chalk, and gypsum). The energy consumption during the grinding of lime is reduced by a factor of 10 with the a high degree of grinding.

L17 ANSWER 5 OF 31 HCA COPYRIGHT 2002 ACS
128:236941 An improved microwave plasma torch for atomic spectrometry. Pack, Brain W.; Hieftje, Gary M. (Department of Chemistry, Indiana University, Bloomington, IN, 47405, USA). Spectrochimica Acta, Part B: Atomic Spectroscopy, 52B(14), 2163-2168 (English) 1997. CODEN: SAASBH. ISSN: 0584-8547. Publisher: Elsevier Science B.V..
AB The anal. performance of a microwave plasma torch was improved through mech. alterations. Several problems reported in earlier designs were addressed: the ignition and stabilization of a He plasma in the MPT was difficult; high powers were required to both ignite and operate the

plasma; otherwise, the plasma would erratically change from an annular to a filament type discharge. In the new torch, the He discharge was stabilized by **replacing** the Cu **central tube** with 1 made of quartz. Air entrainment was alleviated through use of a sheathing gas. This modification simplified the background mass spectrum and raised the effective ionization temp. of the discharge. A detailed schematic diagram of the new microwave plasma torch is presented.

L17 ANSWER 6 OF 31 HCA COPYRIGHT 2002 ACS
128:187609 Process and apparatus for treating **inner** surface of metal **tube** for transporting high-purity material gas. Hara, Masaki (Sony Corp., Japan). Jpn. Kokai Tokkyo Koho JP 10046347 A2 19980217 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-216084 19960729.
AB In the process, a coating is formed on the inner surface of a metal tube by inserting an electrode into the metal tube and **generating plasma** between the electrode and the inner surface of the metal tube. A metal oxide, fluoride, or nitride coating is formed when O-, F compd.-, or N compd.-contg. gas is supplied to the inner surface of the metal tube or when a metal oxide, fluoride, or nitride electrode is used. Alternatively a metal oxide coating is formed by (1) supplying .gtoreq.3 wt.% O3-contg. gas to the inner surface of the metal tube or (2) supplying O-contg. gas and heating. Another coating method for forming a metal oxide, fluoride, or nitride coating by CVD method from O-, F compd.-, or N compd.-contg. gas is also claimed. The app. has a corn-shaped high-pressure electrode which **moves** ahead in the **tube** during the coating process. The coating prevents contamination of the high-purity gas (e.g., for CVD in semiconductor device fabrication).

L17 ANSWER 7 OF 31 HCA COPYRIGHT 2002 ACS
128:108864 Vapor-phase growing device inhibiting precipitation of reaction **product** around exhaust gas-**discharge** outlet. Yamamoto, Yoshinori (NEC Kansai, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10012602 A2 19980116 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-165036 19960626.
AB In the title vapor-phase growing device comprising wafers supported by a boat which is arranged in an external and **inner tubes**, a flow rate-**adjusting** plate is arranged around the exhaust gas outlet between the **inner** and external **tubes** to inhibit pptn. of a reaction product which may causes a thermal stress cracking of the device. Thus, a SiO2 film was formed on a semiconductor wafer in a CVD device using SiH4 and N2O without pptg. SiO2 at the unreacted gas-discharge outlet.

L17 ANSWER 8 OF 31 HCA COPYRIGHT 2002 ACS
126:107498 Method and apparatus for formation of films on **inner** wall of **tubes**. Fujama, Hiroshi; Doi, Akira; Nakahigashi, Takahiro (Nissin Electric Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08296038 A2 19961112 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-106067 19950428.
AB The method comprises setting a rod sputtering target concentrically in a tube, evacuating the tube, introducing a **plasma source** gas into the tube, introducing a plasma into the **tube**, and **moving** a magnetic field along the tube to create an ECR resonance at the area where a film is forming. The app. consists of a vacuum chamber, a holder for the tube to be coated, a holder to support the sputtering target, provisions for introducing a **plasma source** gas and **plasma** into the tube, and multiple coils installed along the axis of the tube for the application of a magnetic field to create ECR resonance.

L17 ANSWER 9 OF 31 HCA COPYRIGHT 2002 ACS
123:271479 MOCVD system for forming superconducting thin films. Hiskes,

Ronald; Dicarolis, Stephen (USA). U.S. US 5447569 A 19950905, 10 pp. (English). CODEN: USXXAM. APPLICATION: US 1990-970660 19901212.

AB The system provides a feed tube having a narrow slot along its length with a uniform mixt. of powd. precursor materials packed **inside** the **tube**. The mixt. compn. is such that the resulting film has the desired stoichiometry. The **tube moves** downward at a controlled rate past a bank of heating lamps surrounded by a heat reflector. At each position of the tube this structure heats a localized section of the precursor material, with a sharp temp. gradient at the boundary of the section so that the heating is confined to this section. The precursor material in the heated section is substantially completely vaporized, with negligible decompn. and nonvolatile residue formation, and the vaporization rate is governed by the downward velocity of the tube. The vaporized material escapes through the longitudinal slot and is swept by a carrier gas into a reaction zone. Oxygen is mixed with the gas stream, and the reaction products are deposited as a thin film on the substrate. A modification of this system includes coils adjacent to the reaction zone, connected to a rf generator. These coils **produce** a **plasma** in the reagent gas mixt. that enhances the chem. reaction.

L17 ANSWER 10 OF 31 HCA COPYRIGHT 2002 ACS

122:203069 VHF coaxial helix **plasma source** for a-Si:H. Stephan, U.; Kuske, J.; Schade, K. (Inst. Festkoerperelektronik, Technische Univ. Dresden, Dresden, 01062, Germany). Materials Research Society Symposium Proceedings, 336(Amorphous Silicon Technology--1994), 79-84 (English) 1994. CODEN: MRSPDH. ISSN: 0272-9172. Publisher: Materials Research Society.

AB Coaxial helical resonators were used in the field of high frequency engineering for narrow band selection of signals from .apprx.10 MHz (VHF and low UHF range). Their favorable geometric construction suggests their use as **plasma source** for etching and deposition of a-Si:H at .nu. = 30-200 MHz - an addnl. but still unusual application. The resonator consists of a cylindric outer conductor, which is closed on 1 side by a bottom plate, and a **rotationally** sym. **inner conductor** of spiral from (helix) measuring .lambda./4. One end of the helix is grounded to the bottom plate (short circuit), the other end is open (open circuit). Power supply is feasible either galvanically by connecting to the helix or inductively by a coupling coil. Applying a suitable coupling factor allows operation at resonance without match box. The **plasma** is **generated** within the resonator and above its open end, which can be adjusted to special conditions of application with the aid of several grids. In contrast to the source commonly used, the coaxial helix **plasma source** proved advantageous with regard to simple design, easy mounting, minimal outer elec. equipment, no dependence of **generated plasma** on measures, good breakdown and discharge behavior, low supply voltage (some tens of volts), high power d., and, due to discharge occurring without filament, to life durability and no thermally generated particle emission. The application of high frequencies leads to a low ion bombardment intensity of a Si-H, and addnl. magnetic fields are not necessary.

L17 ANSWER 11 OF 31 HCA COPYRIGHT 2002 ACS

117:60921 Plasma chemical vapor deposition of halide glasses. Busse, Lynda E.; Aggarwal, Ishwar D. (United States Dept. of the Navy, USA). U. S. Pat. Appl. US 722447 A0 19920215, 16 pp. Avail. NTIS Order No. PAT-APPL-6-722 447. (English). CODEN: XAXXAV. APPLICATION: US 1991-722447 19910627.

AB A method is described for producing **internally** coated glass **tube** preforms for drawing optical-fiber conductors. The **internally** coated glass **tubes** are halogen coated, preferably coated with metal fluorides, so that an optical fiber formed will have a halogen core which conveys light having a wavelength of about

2 to 4 .mu., which is in the IR region, with low attenuation. With one aspect of the method, a carrier gas and a halogenated alkoxide are introduced into a glass **tube** which has an **inner** wall and which is surrounded by a resonator for **producing** a **plasma** from the halogenated alkoxide in the tube. With another aspect of the method, a blend of a carrier gas, an organometallic compd., and a halogen-contg. gas are introduced into a glass **tube** which has an **inner** wall and which is surrounded by a resonator for **producing** a **plasma**. In both cases, the **tube** is **moved** relative to the resonator to **form** a **plasma** zone within the tube such that a halide coating is formed on the **inner** wall of the **tube**. The **plasma generation** and inner glass wall coating take place at a relatively low pressure and at a relatively low temp.

L17 ANSWER 12 OF 31 HCA COPYRIGHT 2002 ACS
117:38154 Switching characteristics of the triggered vacuum gap for a high-repetition-rate pulse-power source. Arita, Hiroshi; Suzuki, Kouji; Kurosawa, Yukio (Hitachi Res. Lab., Ibaraki, Japan). IEEE Transactions on Plasma Science, 20(2), 76-9 (English) 1992. CODEN: ITPSBD. ISSN: 0093-3813.

AB Switching characteristics of sealed-off triggered vacuum gaps (TVG's) were examd. from the viewpoint of a high repetition rate at high current discharge. With a triggered energy of 11 J, it was possible to fire the main gap in both the anode and cathode modes of operation. In repetitive discharge expts., the TVG-tube was put in the **center** of the cylindrical **conductor** and the **switching tube** inductance was about 27 nH. The TVG-tube was confirmed to have capabilities for 1000 shots with a pulse current of 120 kA and a high repetition rate of 5 Hz. These exptl. results indicated that the TVG-tube is a potential repetitive closing switch for the **plasma** x-ray **source**.

L17 ANSWER 13 OF 31 HCA COPYRIGHT 2002 ACS
116:207030 Spectral method for analysis of powdered materials. Lysinov, B. N. (USSR). U.S.S.R. SU 1668923 A1 19910807 From: Otkrytiya, Izobret. 1991, (29), 189. (Russian). CODEN: URXXAF. APPLICATION: SU 1989-4766423 19890929.

AB The sample is prepd. for anal. and supplied continuously into a horizontal high-voltage arc, where the emission spectra of the sample is recorded, according to which the anal. is conducted. To decrease the anal. difficulty, the sample is rapidly placed in a thin-walled **tube** and **moved** into the arc zone, ensuring preservation of the **tube form inside** the **discharge** zone and complete evapn. of the tube and sample in the discharge.

L17 ANSWER 14 OF 31 HCA COPYRIGHT 2002 ACS
116:8688 Endothermic reaction apparatus. Ruhl, Robert C. (Standard Oil Co., USA). Eur. Pat. Appl. EP 450872 A1 19911009, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1991-302767 19910328. PRIORITY: US 1990-504375 19900403.

AB A reaction app. used for steam reforming light hydrocarbons (e.g., natural gas) to produce synthesis gas for NH3 synthesis is a reaction vessel for effecting an endothermic reaction comprising .gtoreq.1 heater(s) for heating the vessel, an input means for feeding the feed gas, and a **discharge** means for removing **product** gas. The heater comprises .gtoreq.1 ceramic combustion tube concentrically surrounding a fuel feed tube which extends at least partially along the length of and **inside** the combustion **tube**, and means for supplying fuel to the fuel feed tube and air to the combustion tube where the fuel will combust and generate heat which is transferred into the reaction vessel by the combustion **tube**, and means for **removing** exhaust

gases from the heater.

L17 ANSWER 15 OF 31 HCA COPYRIGHT 2002 ACS
115:63512 Hybrid **rotating** arc-**tube** furnace device for microsolution analysis. Slinkman, David; Sacks, Richard (Dep. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA). Applied Spectroscopy, 45(4), 692-6 (English) 1991. CODEN: APSPA4. ISSN: 0003-7028.
AB A hybrid arc-furnace system using a magnetically rotated, concentric electrode arc connected to a pyrolytic graphite tube furnace for emission spectrometric anal. is described. The arc is formed between a 5-mm **internal** diam. graphite **tube** anode and a W/Th wire cathode. A 0.9-kG magnetic field from a ceramic permanent magnet causes the arc plasma to rotate at about 1.4 kHz, thus **forming** a diffuse **plasma** dome covering the end of the anode cylinder. A 10-mm-long ceramic tube connects the furnace to the arc anode. The graphite anode and graphite furnace are housed in the same chamber. Detection limits for various trace metallic elements are in the ppb and sub-ppb range. Design features and performance data are presented.

L17 ANSWER 16 OF 31 HCA COPYRIGHT 2002 ACS
115:18118 Air-cooled argon laser tube with new copper-tungsten-aluminum oxide structure. Yu, Qinrong; Wang, Kuixiong; Ma, Junzhi (Optophys. Dep., Changchun Inst. Opt. Mech., Changchun, 130022, Peop. Rep. China). Zhongguo Jiguang, 18(2), 160 (Chinese) 1991. CODEN: ZHJIDO. ISSN: 0258-7025.
AB The title laser tube was fabricated. It was composed of a set of 95 Al oxide ceramic ring alternates with Cu heat-conductive plates; W disks were welded on the Cu plates. The small hole at the center of the W disk **forms** a **discharging** capillary. The design is equiv. to extending the heat-conductive Cu plate from **inside** the discharging **tube** to outside the tube to act as a air-cooling plate. The advantage of the title laser tube is that the heat **generated** at **discharging** is directly transfered to outside the **tube** and **removed** by the cooling gas. When the tube pressure, discharging current, and axial magnetic field were 40 Pa, 10 A, and .apprx.400 G, resp. the output blue-green light power was .gtoreq.40 mW. The threshold value was 2.1 A and the energy transform efficiency was 0.3 .times. 10-4. The tube has been used for >600 h in the lab. and the performance is stable.

L17 ANSWER 17 OF 31 HCA COPYRIGHT 2002 ACS
112:61552 Heating of quartz glass by microwave. Tanaka, Gotaro; Suganuma, Hiroshi; Urano, Akira; Mizuno, Shunichi (Sumitomo Electric Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01183436 A2 19890721 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-7584 19880119.
AB A thermal **plasma** is **formed inside** a quartz glass **tube**, by passing a **plasma-forming** gas through the tube while applying a microwave from a source outside the tube, a quartz glass article is inserted **inside** the **tube** for preheating, the gas flow is stopped, and the **tube** is **removed** to heat the article directly by the microwave. This method prevents contamination of the quartz glass article during heating, and is esp. useful in the manuf. of optical fibers.

L17 ANSWER 18 OF 31 HCA COPYRIGHT 2002 ACS
109:133883 Production of self-supporting structural ceramic elements. Zverina, Karel; Kroupa, Petr (Czech.). Czech. CS 244752 B1 19880601, 5 pp. (Czech). CODEN: CZXXA9. APPLICATION: CS 1982-7221 19821011.
AB Refractory articles (esp. tubes and crucibles) are **produced** by **plasma** spraying an oxide ceramic on a core soaked with a removable interlayer and preheated to 450-950 K, cooling, removing the interlayer by dissoln. or melting, and sepg. the ceramic layer from the core. Preferably, the interlayer is Al, Zn, or KCl. A core was spray-coated

with an Al layer 0.5 mm thick, preheated to 670 K, and plasma-coated with $ZrSiO_4$ powder. After cooling, and sepn. of the Al interlayer, a refractory **tube** (**inner** diam. 100 mm, outer diam. 110 mm, length 960 mm) was obtained.

L17 ANSWER 19 OF 31 HCA COPYRIGHT 2002 ACS
109:60059 Manufacture of optical fibers. Geittner, Peter; Lydtin, Hans; Wilson, Howard (Philips Patentverwaltung G.m.b.H., Fed. Rep. Ger.). Ger. Offen. DE 3635034 A1 19880421, 8 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1986-3635034 19861015.

AB In prepn. of optical fibers with peripheral, radial, and/or axial optical modulation structures defining the n profile by chem. vapor deposition of glass inner coating in a glass tube with .gtoreq.1 deposition condition varied, collapse of the tube, and drawing, the deposition process is a plasma chem. vapor deposition (PCVD) process and the process parameters are varied for uniform material transport to the **tube** **inner** wall and/or deposition of glass over the tube circumference and/or axially positioning of local deposition zones in relation to the **plasma generator**. Many preforms were prepd. by the PCVD process with **rotation** of the **tube** and impressed temp. asymmetry varied, but other conditions held const. The n profile modulation obtained is presented graphically.

L17 ANSWER 20 OF 31 HCA COPYRIGHT 2002 ACS
105:26247 Separator for liquids. Durmashkin, G. S. (USSR). U.S.S.R. SU 1223949 A1 19860415 From: Otkrytiya, Izobret. 1986, (14), 21-2. (Russian). CODEN: URXXAF. APPLICATION: SU 1984-3747066 19840530.

AB The separator for the crude oil-water mixts. includes a rotor with an extender mounted on the upper and lower shafts, an upper disk with a **central tube** for the **removal** of the lighter fraction, a lower disk with a cylindrical chamber disposed below the extender, a central empty cavity connected to the cylindrical chamber, inlet tubes, an automatic control unit that is elec. connected to the valves mounted on the tubes for the **discharge** of the **products**, and electrodes disposed in the cylindrical chamber. In order to improve the sepn. efficiency, the separator is also equipped with a perforated tube, one end of which is connected the upper shaft and the other end to the upper disk.

L17 ANSWER 21 OF 31 HCA COPYRIGHT 2002 ACS
104:198952 Influence of the **generator** frequency and the **plasma** gas inlet area on torch design in inductively coupled plasma atomic emission spectrometry. Michaud-Poussel, E.; Mermet, J. M. (Serv. Cent. Anal., CNRS, Vernaison, 69390, Fr.). Spectrochim. Acta, Part B, 41B(1-2), 125-32 (English) 1986. CODEN: SAASBH. ISSN: 0584-8547.

AB Besides the conventional 27 MHz frequency, expts. were carried out up to 100 MHz in order to design low power, low flow rate torches. At higher frequencies, the dimensions of the torch are less crit. and it is not necessary to use reduced-size torches. While a toroidal-shaped plasma is maintained, a lower value of 3 L/min for the gas was found, whatever the frequency. Expts. were carried out with demountable torches. In order to avoid any centering **adjustment** of the various **tubes**, it is possible to design a torch with an outer gas inlet area, i.e. annulus area between the outer and **inner tubes**, independent of the external tube. Moreover, at 100 MHz, it is possible to use a torch with a 2-tube (external and injector tubes) configuration with a gas consumption <15 L/min.

L17 ANSWER 22 OF 31 HCA COPYRIGHT 2002 ACS
104:170656 Plasma reaction apparatus and its operation. Ogawa, Kazufumi; Yasuda, Yoshiko; Kikuchi, Kazuya (Matsushita Electric Industrial Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61015976 A2 19860124 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1984-138153 19840703.

Hassanzadeh 09/625,200

AB The plasma reaction app. is equipped with a vertical reactor tube provided with at least a feed gas inlet, a **plasma generating** means, and a gas outlet and also a substrate insert means. The reactor tube is equipped with a heater means and a coil or electrode means at its outside for **plasma generation**. A substrate holding means along with the substrate is inserted into the reactor tube from its top or its bottom. The substrate holding **tube** is **rotatable inside** the reactor **tube**. The app. of this arrangement produces uniform film with min. contamination under a fixed pressure. It can be used in various applications such as plasma chem. vapor deposition (e.g., Si3N4 film formation from SiH2N2, NH3, Ar) and plasma etching of a Si substrate by using SF6.

L17 ANSWER 23 OF 31 HCA COPYRIGHT 2002 ACS
101:196903 **Plasma generation** method by electric **discharge** in plasma chemical deposition of glass. (Furukawa Electric Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 59130535 A2 19840727 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-5515 19830117.

AB In the plasma chem. vapor deposition of glass particles on the inner surface of a glass tube, the **tube** is arranged **inside** a waveguide **tube** and also a **plasma generator** is arranged outside of the **tube** assembly and **moved** reciprocally in the **tube** length direction. The **plasma generator** is resonated by microwaves from the waveguide tube. Thus, an optical fiber preform contg. SiO2, GeO2, and B2O3 was **made** by **plasma** chem. vapor deposition as above. The preform had uniform compn. along its length.

L17 ANSWER 24 OF 31 HCA COPYRIGHT 2002 ACS
98:112514 Method and arrangement for **internally** coating a **tube** by reactive deposition from a gas mixture activated by a plasma. Tuin, Hermanus Nicolaas (N. V. Philips' Gloeilampenfabrieken , Neth.). Eur. Pat. Appl. EP 64785 A1 19821117, 8 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1982-200486 19820423. PRIORITY: NL 1981-2149 19810501.

AB Tubes made of elec. insulating material (e.g., SiO2) are internally coated by reactive deposition from a gas mixt. (e.g., SiCl4-GeCl4-O) passing through the tube. A plasma reciprocally **moving** along the **tube** activates the deposition. High-frequency elec. energy capacitively applied to the gas phase by means of 2 flames **forms** the **plasma** in the tube. The app. consists of burners for **plasma generation**, gas supply system, and means for moving the burners.

L17 ANSWER 25 OF 31 HCA COPYRIGHT 2002 ACS
87:18541 Apparatus and method for **preparing** blood **plasma** and blood serum samples for analysis. Hardy, Stanley Matthias (Aesculapius Scientific Ltd., UK). Ger. Offen. DE 2642495 19770414, 29 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2642495 19760922.

AB The app. consists of 2 **tubes**, 1 **inside** the other. The outer tube is marked with the patient's name and other information concerning the blood sample, and the **inside tube** contains the freshly drawn sample. After transport to the clin. lab., the blood cells are sepd. from the plasma or serum by centrifugation or other method, the **inside tube** is **removed**, and the plasma or serum is decanted into the outer tube, where it is stored until needed.

L17 ANSWER 26 OF 31 HCA COPYRIGHT 2002 ACS
85:9628 **Inner**-coated glass **tubes** for preparing light-conducting fibers. Kueppers, Dieter; Lydtin, Hans; Rehder, Ludwig (Philips Patentverwaltung G.m.b.H., Ger.). Ger. Offen. DE 2444100

19760325, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1974-2444100 19740914.

AB The title items are manufd. by reactive deposition of an internal coating by passing a gas at pressure 1-10 mm through the glass **tube** while it is **moving** through a plasma zone with a superimposed heating zone which is at a temp. chosen so that no diffusion into the inner wall occurs. Thus, SiO2 was deposited from a SiCl4-O gas mixt. on the inner walls of a quartz glass **tube** of **inside** diam. 6 mm by passing the gas-filled tube through a **plasma-producing** zone in an oven. This method gave a strongly adhering, homogeneous coating without the gas phase reactions and cluster **formation** obsd. when the **plasma** was used at room temp.

L17 ANSWER 27 OF 31 HCA COPYRIGHT 2002 ACS

84:151712 Monomer casting of rotation symmetric articles. Wichterle, Otto (Czech.). Czech. CS 159359 19750815, 4 pp. (Czech). CODEN: CZXXA9. APPLICATION: CS 1970-4629 19700702.

AB A rotational molding app. for polymn.-casting of hydrogel materials is described. Continuous casting is carried out in individual cylindrical molds passing through a **rotating** vertical **tube** with a heating/cooling jacket and a bottom inlet for inert gas. The monomer charge is added at the top and **product discharged** from the bottom, while inert gas flows upward in grooves formed in the **tube inner** surface or mold walls. In an example, glass-lined 4.8 .times. 18.0 mm parabolic molds were charged with 0.125 ml of a mixt. of HO(CH2)2O2CCMe:CH2 59.68, CH2:CMeCO2(CH2)2O2CCMe:CH2 0.12, glycerol 40, and (iso-PrO2CO)2 0.2 part and rotated at 460 rpm/75.degree. to give hydrogel [25053-81-0] paraboloids used in artificial heart valves. Polyacrylonitrile [25014-41-9] was similarly cast in aq. ZnCl2.

L17 ANSWER 28 OF 31 HCA COPYRIGHT 2002 ACS

67:34484 Particle manufacture and prevention of agglomeration of fine atomized fluid particles during cooling. Lemelson, Jerome H. U.S. US 3320338 19670516, 5 pp. Continuation-in-part of U.S. 3227642 (English). CODEN: USXXAM. APPLICATION: US 19641022.

AB Continuation-in-part of U.S. 3,227,642 (CA 64: 6136h). Sprayed metallic, ceramic, glass, or polymer droplets are discharged into the axis of a cylindrical wall of water flowing, in adequate vol. for rapid cooling, along the **interior** of a metallic **tube rotated** in bearings around its axis that can be inclined in any direction including horizontal or vertical, and the particles cooled in whirling surrounding stream are deposited in a chamber and later sepd. from the cooling fluid which is filtered and recycled. The material to be atomized can be fed to the sprayer as a melt, or as a wire, or granular solid to a burner or **plasma**-arc **generator** located inside of the rotating cylindrical coolant wall. Three types of such spraying or melting devices are described and illustrated. Part of the coolant can be directed along the axial material-supply tube, as well as being rotated to form the cylindrical wall. The collecting chamber can be replaced by a closed end of the **rotated** metallic **tube**, holding sufficient coolant to protect the entire end as well as the sides, and having a valved outlet at 1 corner which is elec. controllable from a distance. Coolants can be used for reacting in various ways with the atomized materials.

L17 ANSWER 29 OF 31 HCA COPYRIGHT 2002 ACS

66:106350 Wave reactor. Bodmer, Jakob E.; Lauer, James L. (Sun Oil Co.). U.S. US 3307918 19670307, 11 pp. (English). CODEN: USXXAM. APPLICATION: US 19660408.

AB A reactor where endothermic chem. reactions are carried out by subjecting a reactant material to one or more mech. shock waves to produce a high temp. in the material for a short time is described. The wave reactor consists of a straight, elongated, open-ended tube mounted in a disk which

rotates (at high angular velocity) within a port ring so that the **tube rotates** past the ends of lines and conduits which are coupled to ports in the ring. As one end of the **tube rotates** past the end of conduits, fresh charge gas is admitted to the tube. At the same time, the other end of the tube is passing conduits which lead to an evacuator; this causes the new charge gas to push out of the tube the gases left over from the previous cycle of operation, by a scavenging process (essentially at atm. pressure). When the opposite ends of the tube come into alignment with the ends of lines, both ends of the tube are suddenly connected to a reservoir contg. high-pressure driving gas, H. The H enters the tube with high velocity from both ends, creating 2 shock waves which push the process gas (already in the **tube**) toward the **middle**. The process gas is compressed adiabatically and brought rapidly to the reaction temp., .gtoreq.3200.degree.F. The 2 shock waves meet in the middle and are reflected. After completion of the compression process, the tube contg. a product gas and H at high pressure and both ends of the tube come into alignment with the ends of lines while both ends simultaneously become open to spaces of a pressure below the pressure in the tube. H flows out the tube setting up expansion waves. The expansion reduced the pressure and temp. of the product gas. The 2 expansion waves meet in the **middle** of the **tube** and are reflected to each tube end to complete the 1st expansion process. The expansion process is repeated 2 more times and the tube ends are opened each time to spaces of progressively lower pressure. After the 3rd expansion stage, the converted gaseous mixt. is discharged from the **center** of **tube** when the rotary porting arrangement operates to connect the **central** region of the **tube** to **product discharge** lines. The wave reactor can be used for prepn. of HCN and C2H2.

L17 ANSWER 30 OF 31 HCA COPYRIGHT 2002 ACS

66:30117 Plastic surface treatment. Van Paassen, Hugo L. L.; Guimento, Angelo (Martin-Marietta Corp.). U.S. US 3288638 19661129, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 19621009.

AB A plastic material such as polyethylene or poly(tetrafluoroethylene) (I) placed between a hollow cathode and an anode is subjected to a glowing elec. discharge in an inert gas chamber to give greatly enhanced coatability to the plastic surface. Metals such as Nb, Pb, and Sn can be easily coated by vapor deposition on the treated outer surface of a I-insulated elec. conductor. Thus, a superconducting delay line consisting of a Nb **inner conductor** (7 mils diam.) provided with .apprx.6 mils I insulation and having .apprx.5 .times. 10-5 in. outer Pb coating was prepd. The delay line was formed by treating the outer I surface by using 2 hollow cathodes, each cathode being 2 in. length by 1.5 in. diam. and having 0.95-in.-diam. holes in the ends. The cathodes were made of 16-mesh Cu-wire screen and the **discharge** was **formed** through He under 100 .mu. pressure. After the discharge was initiated, 300-400 v. a.c. potential existed across the cathode. The insulated conductor made 4 passes through the cathodes in traveling from one rotating drum to the other at 40 ft./hr. The surface-treated conductor was coated in a coating chamber (10-5 mm.) provided with a metal boat and reflector plate connected by an elec. heat source and **conductor rotating** drums. Pb sludge in the boat and the reflector were heated to .apprx.720.degree. and 760.degree., resp. The conductor was drawn under the reflector at 100 ft./hr. The process produced a uniform Pb coating.

L17 ANSWER 31 OF 31 HCA COPYRIGHT 2002 ACS

53:15118 Original Reference No. 53:2796h-i,2797a The electron torch. Laroche, J. (Univ. Paris). Colloq. nationaux centre natl. recherche sci. (Paris), No. 11(Chim. Hautes Temp., Paris 1954), 71-81 (Unavailable) 1955.

AB The electron torch is a high-pressure elec. **discharge produced** in certain gases at ultrahigh frequencies. A magnetron

fed by a d.c. of 2500 v. was used as the generator of the ultra-high-frequency waves. To start the operation an arc is struck for a short period by bringing a **conductor** toward the **central** electrode. Upon **removing** the **conductor**, the discharge torch appears but it does not direct itself toward the other two electrodes of the app., although there is a 2000 v. potential difference between them. Because of convection currents the discharge takes the shape of a flame, reaching temps. up to 3000.degree.. Atoms, ions, free radicals, and excited mols. coexist in the flame. In order to be able to study chem. reactions, the products must be quenched by a gas jet. The formation of NO from O and N at temps. above 2700.degree. was studied by this method and it was found that in air and at atm. pressure the max. NO concn. is 4.8%, as was expected from thermodynamic calcns. Halogenated hydrocarbons were also studied by this method.

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Set     Items   Description
S1    1948827   DISCHARG???? ? OR PLASMA
S2     137716   S1(3N)(GENERAT? OR SOURCE? ? OR PRODUC?????? ? OR PROD? ? -
              OR CREAT???? ?)
S3      65485   S1(3N)(FORM?? ? OR FORMING? ? OR FORMAT???? ? OR MAKE? ? OR
               MADE? ? OR MAKING? ? OR SYNTHESI? OR PREPAR?????? ? OR PREP?
              ? OR PRPN?)
S4     748905   TUBE? ? OR COND OR CONDUCTER? ? OR CONDUCTOR? ?
S5      25510   S4(3N)(INNER? OR INSIDE? OR CENTRAL? OR CENTER? OR CENTRE?
              OR INTERIOR? OR INTERNAL? OR INMOST? OR MIDDLE?)
S6       5295   S4(3N)(DISPLAC? OR MOVAB? OR MOVE? ? OR MOVING OR SHIFT????
               ? OR SLID??? ? OR MOBIL?????? ? OR REPOSITION? OR RE()POSITI-
              ON???? ? OR REARRANG?)
S7      23601   S4(3N)(RE()ARRANG?????? ? OR ADJUST? OR REPLAC? OR ROTAT??-
              ???? ? OR REMOV? OR INTERCHANG? OR EXCHANG? OR SWITCH? OR INT-
              ER()CHANG?)
S8       1873   S4(3N)(WITHDRAW? OR 'WITH'()DRAW???? ? OR EXTRACT???? ?)
S9      11271   (CO()AXIAL? OR COAXIAL? OR MULTIPLE? ? OR TWO OR PAIR?? ? -
              OR MANY OR MULTI OR SEVERAL OR NUMEROUS OR PLURAL? OR NUMBER)-
              (1W)S4
S10      3551   (SECOND OR DOUBLE OR DUAL OR TWIN)(1W)S4
S11       644   S2:S3 AND S5
S12       230   S2:S3 AND S6:S8
S13        26   S11 AND S12
S14      1825   S5 AND S6:S8
S15       152   S14 AND S9:S10
S16         8   S15 AND S1
S17        31   S13 OR S16
S18        18   RD (unique items)
S19         1   S18/2001:2002
S20        17   S18 NOT S19
?t20/7/all

 20/7/1     (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC
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6820968   INSPEC Abstract Number: A2001-05-9630K-016
  Title: The unipolar inductor myth: mass addition or motional electric
field as the source of field-aligned currents at Io
  Author(s): Russell, C.T.; Huddleston, D.E.
  Author Affiliation: Inst. of Geophys. & Planetary Phys., California
Univ., Los Angeles, CA, USA
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Journal: Advances in Space Research Conference Title: Adv. Space Res. (UK) vol.26, no.10 p.1665-70
Publisher: Elsevier,
Publication Date: Nov. 2000 Country of Publication: UK
CODEN: ASRSDW ISSN: 0273-1177
SICI: 0273-1177(200011)26:10L.1665:UIMM;1-K
Material Identity Number: B949-2000-024
U.S. Copyright Clearance Center Code: 0273-1177/2000/$20.00+0.00
Conference Title: Planetary Ionospheres and Magnetospheres. C3.2/DO.9 Symposium of COSPAR Scientific Commission C and the B0.5 Symposium of COSPAR Scientific Commission B held during the Thirty-Second COSPAR Scientific Assembly
Conference Sponsor: Int. Acad. Astronautics; COSPAR
Conference Date: July 1998 Conference Location: Nagoya, Japan
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Theoretical (T)
Abstract: The nature of the interaction of Io with the Io torus has undergone an important paradigm shift due to the many results of the Galileo flyby and the reinterpretation of the Voyager data. The main obstacle to the flowing plasma appears to be mass loading. Only a small fraction of the flux tubes that are flowing toward Io's cross section at infinity join up with the Io magnetic field and flow slowly across Io's polar caps. The mass pickup on these flux tubes is heated much less than on the tubes that flow near to but around Io. Both Voyager and Galileo data show this deceleration and deflection. The slowed plasma in the wake is accelerated up to corotational velocities by 6 R/sub Io/ downstream. This picture is much different than the original picture of Io as a unipolar inductor in which an electric potential drop of 500 kV appeared across Io. In fact, the potential drop is only about 50 kV. The current flowing along magnetic field lines in the vicinity of Io, however, is much greater than heretofore believed. The original theories did not take into account the size of the mass-loading region or the closure currents associated with the bent field lines. Thus they assumed that the currents would be limited by the Alfven conductance and the size of Io. The field-aligned current system appears to be much larger than previously proposed and shifted downstream. This downstream shift has important consequences for the possible size of the Io intrinsic field. It may be larger than originally proposed. The location and source of these current systems does not affect their capability of generating the potential drops along the magnetic field that were postulated to be responsible for radio emissions. The low potential drop across Io evidenced by the small fraction of the wake stream lines that intersect Io and the low pickup ion temperature produces cold, slow flowing flux **tubes** that can **interchange** with the hot torus **tubes** just **inside** the Io orbit, **producing** the cold **plasma** torus. (13 Refs)
Subfile: A

20/7/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

5701003 INSPEC Abstract Number: A9721-9420-011
Title: Heating and low-frequency modulation of electrons observed during electron beam operations on TSS 1
Author(s): Gough, M.P.; Hardy, D.A.; Burke, W.J.; Oberhardt, M.R.; Gentile, L.C.; Huang, C.Y.; Cooke, D.L.; Raitt, W.J.; Thompson, D.C.; McNeil, W.; Bounarg, K.
Author Affiliation: Space Sci. Centre, Sussex Univ., Brighton, UK
Journal: Journal of Geophysical Research vol.102, no.A8 p.17335-57
Publisher: American Geophys. Union,
Publication Date: 1 Aug. 1997 Country of Publication: USA
CODEN: JGREA2 ISSN: 0148-0227
SICI: 0148-0227(19970801)102:A8L.17335:HFME;1-X
Material Identity Number: J047-97053
U.S. Copyright Clearance Center Code: 0148-0227/0148-0227/97/JA-01499$9.00

Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: The authors have studied electron responses measured by two electrostatic analyzers (ESA A and B) that comprise the Shuttle Potential and Return Electron Experiment (SPREE) to 60 prolonged beam emissions by the fast pulsed electron generator (FPEG) during the first flight of the Tethered Satellite System (TSS 1). When the beam cleanly escaped into space, responses depended on whether the pitch angle of the beam, alpha /sub B/, was less than or greater than 90 degrees . Beam-like structures were detected by SPREE when alpha approximately=<90 degrees , but not when alpha /sub B/>90 degrees . Secondary electron fluxes measured by SPREE peaked at pitch angles alpha between 65 degrees and 75 degrees when alpha /sub B/<90 degrees , and at alpha approximately=90 degrees when alpha /sub B/>90 degrees . At other pitch angles the distributions of electrons returning to the shuttle had repeatable thermal and power law shapes. The distinctive distribution functions are attributed qualitatively to the different regions in and near the beam traversed by electrons reaching SPREE under the two alpha /sub B/ conditions. A large fraction of the trajectories of electrons reaching SPREE ESA A with alpha /sub B/(>)90 degrees lie **inside** (outside) beam flux **tubes** . Measurements by a particle correlator in the SPREE data processor show that in 25 cases some of the returning-electron distributions f/sub e/ were modulated at frequencies in the low kilohertz range. The modulations appeared in portions of the distributions where delta f/sub e// delta upsilon <0 and at frequencies that correspond to none of the plasma's normal modes. In light of previously reported wave measurements taken near the shuttle during electron beam emissions, the present authors suggest that the modulated electrons were bunched by large-amplitude, ion acoustic waves propagating nearly perpendicular to the Earth's magnetic field. The waves were **generated** as **plasma** responses to negative space charges in the electron-beam flux **tubes** **moving** at orbital speed across the ionosphere. (32 Refs)
Subfile: A

20/7/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

5630011 INSPEC Abstract Number: A9716-5275-005, B9708-8370-044
Title: High density plasma opening switch experiments on Hawk
Author(s): Weber, B.V.; Commisso, R.J.; Goodrich, P.J.; Riley, R.A., Jr.
Author Affiliation: Div. of Plasma Phys., Naval Res. Lab., Washington, DC, USA
Conference Title: Digest of Technical Papers. Tenth IEEE International Pulsed Power Conference (Cat. No.95CH35833) Part vol.1 p.202-7 vol.1
Editor(s): Baker, W.L.; Cooperstein, G.
Publisher: IEEE, New York, NY, USA
Publication Date: 1995 Country of Publication: USA 2 vol. (xxxii+xxvi+1544) pp.
ISBN: 0 7803 2791 8 Material Identity Number: XX97-01231
Conference Title: Digest of Technical Papers. Tenth IEEE International Pulsed Power Conference
Conference Date: 3-6 July 1995 Conference Location: Albuquerque, NM, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Experimental (X)
Abstract: Previously, plasma opening switch (POS) experiments on the Hawk pulsed power generator have shown fast opening (<100 ns) into electron-beam diode loads, generating 1-2 MV after 0.5-1 mu s conduction time. The plasma density measured in these experiments was in the 10/sup 15/-10/sup 16/ cm/sup 3/ range. Plasma thinning by J*B forces during conduction reduces this density, ultimately leading to gap formation in the low density region. The Hawk experiments described here were designed to investigate this switching phenomenon with higher initial densities, in the 10/sup 17/ cm/sup -3/ range, to determine whether fast switching and high voltage could be sustained. This scaling is important for POS applications on

future, higher energy generators. Experiments were performed with a relatively small **center conductor** radius (1.27 cm) and small plasma length (3 cm or 8 cm). Either 36 or 12 cable gun **plasma sources** were used to inject plasma into the coaxial switch region. The anode structure was varied to investigate techniques to increase the voltage when the switch opens. High voltage (1.5 MV) switching was observed at ~0.9 mu s conduction time when the radial gap between the **inner** and outer **conductors** in the **switch** region was reduced from 7 cm to 2 cm. These experiments demonstrate that, at least for some geometrical configurations, POS operation at 10/sup 17/ cm/sup -3/ density is similar to operation at one or two orders-of-magnitude lower density. Presumably, the plasma thinning mechanism results in a similar gap in all cases. (4 Refs)
Subfile: A B

20/7/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

5309117 INSPEC Abstract Number: A9615-8640F-006
Title: Thermodynamic design of a phase change thermal storage module
Author(s): Conti, M.; Bellecci, C.; Charach, Ch.
Author Affiliation: Dipartimento di Matematica e Fisica, Camerino Univ., Macerata, Italy
Journal: Transactions of the ASME. Journal of Solar Energy Engineering vol.118, no.2 p.89-96
Publisher: ASME,
Publication Date: May 1996 Country of Publication: USA
CODEN: JSEEDO ISSN: 0199-6231
SICI: 0199-6231(199605)118:2L.89:TDPC;1-6
Material Identity Number: T211-96003
U.S. Copyright Clearance Center Code: 0199-6231/96/$3.00
Language: English Document Type: Journal Paper (JP)
Treatment: Theoretical (T)
Abstract: This paper analyzes the irreversibilities due to the heat transfer processes in a latent heat thermal storage system. The thermal storage module (TSM) consists of a cylindrical shell that surrounds an **internal coaxial tube** . The shell side is filled by a phase change material (PCM); a fluid flows through the **inner tube** and **exchanges** heat along the way. The most fundamental assumption underlying this study is that the exergy of the hot fluid stream in the active phase is **discharged** into the environment and completely destroyed, unless it is partially intercepted by the storage system. A numerical study is conducted to identify and to minimize the thermodynamic losses of the storage and removal processes. The dependence of the second-law efficiency of the system on various design parameters is investigated and discussed. (24 Refs)
Subfile: A

20/7/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC

5042016 INSPEC Abstract Number: A9519-8630L-007
Title: Dynamic equilibrium of streamer filaments in a homogeneous flow field
Author(s): Brouwer, A.G.; Alekseev, G.Yu.; Bityurin, V.A.; Merck, W.F.H.
Author Affiliation: Inst. for High Temp., Moscow, Russia
Journal: Magnitnaya Gidrodinamika Conference Title: Magn. Gidrodin. (Latvia) vol.30, no.3 p.419-27
Publication Date: July-Sept. 1994 Country of Publication: Latvia
CODEN: MAGIAI ISSN: 0025-0015
Translated in: Magnetohydrodynamics vol.30, no.3 p.349-58
Publication Date: July-Sept. 1994 Country of Publication: USA
CODEN: MGHDAG ISSN: 0024-998X

U.S. Copyright Clearance Center Code: 0024-998X/94/3003-[redacted]9$12.50
Conference Title: Seventh Beer-Sheva International Seminar on MHD Flows and Turbulence
Conference Date: 14-18 Feb. 1993 Conference Location: Jerusalem, Israel
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Treatment: Theoretical (T)
Abstract: From the experiments performed in the Eindhoven MHD facilities it is clear that the currents in a noble gas-alkali MHD generator are constricted in narrow channels, called streamers. These streamers appear to exist as a bunch of **several** hundred **tubes** with high electrical conduction, called filaments, whereas the surrounding gas has a low electrical conductivity. The aim of the paper is to find an explanation how these fine filaments can be sustained in the supersonic flow, moving downstream with slightly lower velocity than the main flow. At the Institute for High Temperatures (IVTAN) a model has been developed where these streamer filaments are considered as liquid tubes in a surrounding liquid. The electromagnetic forces are prescribed and applied only **inside** the **tubes** . The experimental fact that the bunch of filaments moves through the MHD channel with velocities slightly different from the surrounding nonconducting gas led to a model where the mutual influence of neighboring filaments was taken into account by dividing the space into three regions: an undisturbed outer flow, a cylinder around the filaments with radius equal to half the distance between the filaments, and the filament tube itself. The calculations performed show that **inside** the **tubes** two counter- **rotating** vortices are produced with velocities close to the relative velocity between filament and surrounding gas. The strong mixing of the gas inside the filament validates the assumption of constant physical parameters within the filament. Further it is shown that the viscous forces can balance the strong electromagnetic ones. As no methods are known to exist to increase the size and current carrying capacity of the filaments the experiments on linear Ar-Cs MHD generators are abandoned. (8 Refs)
Subfile: A

20/7/6 (Item 6 from file: 2)
DIALOG(R)File 2:INSPEC

4923594 INSPEC Abstract Number: A9509-2915-007, B9505-7410-014
Title: Retrofit conversion of a low impedance, short pulse electron beam accelerator to high impedance, long pulse operation
Author(s): Bernstein, B.H.; Kato, K.G.; Sar, D.R.
Author Affiliation: Bernstein Design Services, Livermore, CA, USA
Part vol.2 p.876-9 vol.2
Editor(s): Prestwich, K.R.; Baker, W.L.
Publisher: IEEE, New York, NY, USA
Publication Date: 1993 Country of Publication: USA 2 vol. (xxiv+xvi+1072) pp.
ISBN: 0 7803 1416 6
Conference Title: Proceedings of 9th International Pulsed Power Conference
Conference Date: 21-23 June 1993 Conference Location: Albuquerque, NM, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Applications (A); Practical (P)
Abstract: The authors describe how an existing relativistic electron beam generator has been modified to increase its output pulse width from 100 ns to either 300 ns or 1,000 ns. In its original form, the generator consisted of a water insulated, 5.25 SZ coaxial pulse **forming** line (PFL) that **discharged** into a field emission diode through a low inductance gas pressurized spark gap switch. A twenty stage Marx generator charged to the PFL to as high as 2 MV. At this voltage, an approximately 1 MV output pulse is developed into a matched load. An adjustable resistor shunting the PFL, permitted matching its output to load impedances higher than 5.25 Omega .

The load impedance planned for the modified system is of the order of 100 Omega and it is desired to deliver up to 800 kV to it. Important considerations are pulse shape, ability to reverse the modifications and, of course, reasonable cost-the latter being obtained by using as much of the original system as possible. The approach selected for the modification involved **replacing** the **center conductor** of the original PFL with one that is spiraled. This scheme provides long pulses within the same outer conductor used by the original short-pulse generator. (2 Refs)
Subfile: A B

20/7/7 (Item 7 from file: 2)
DIALOG(R)File 2:INSPEC

4916069 INSPEC Abstract Number: A9508-5275-024, B9505-8370-039
Title: High power opening switch operation on Hawk
Author(s): Goodrich, P.J.; Hinshelwood, D.D.; Commisso, R.J.; Grossmann, J.M.; Kellogg, J.C.; Weber, B.V.
Author Affiliation: Jaycor, Vienna, VA, USA
Part vol.1 p.511-15 vol.1
Editor(s): Prestwich, K.R.; Baker, W.L.
Publisher: IEEE, New York, NY, USA
Publication Date: 1993 Country of Publication: USA 2 vol. (xxiv+xvi+1072) pp.
ISBN: 0 7803 1416 6
Conference Title: Proceedings of 9th International Pulsed Power Conference
Conference Date: 21-23 June 1993 Conference Location: Albuquerque, NM, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Experimental (X)
Abstract: The Hawk pulsed power **generator** is used in **plasma** opening switch (POS) experiments in the 1- mu s conduction time regime to study long conduction time switch physics. Experiments reported here include modifying the POS electrode geometry, injecting plasma into the electron-beam diode, using gas gun **plasma sources** (with H/sub 2/, He, and Ar gases), and using a helical cathode **center conductor** in the **switch** region to increase the total insulating magnetic field. Tapering the cathode **center conductor** over the 8 cm POS length from 10 cm to, typically, a 2.5 cm diameter produced peak load powers of 0.7 TW with 55 kJ delivered to the diode (20% energy efficiency) with carbon-coated flashboards as the **plasma source** . Performance (voltage, power generated) with a straight 10 cm diameter cathode deteriorated when the POS anode outer conductor just downstream of the switch was extended toward the load at the same radius as the switch. Load power was up to 70% higher with a plasma-filled diode (PFD) used in conjunction with the POS for short POS conduction times (400 ns and less). Use of a helical **center conductor** resulted in dramatically degraded switch performance for >350 ns conduction times. Switch performance with gas guns was generally comparable to that with flashboards in a given switchboard configuration and was independent of the gas (H/sub 2/, He, and Ar) used. (5 Refs)
Subfile: A B

20/7/8 (Item 8 from file: 2)
DIALOG(R)File 2:INSPEC

04166300 INSPEC Abstract Number: A9214-5275-003, B9207-8360-014
Title: Switching characteristics of the triggered vacuum gap for a high-repetition-rate pulse-power source
Author(s): Arita, H.; Suzuki, K.; Kurosawa, Y.
Author Affiliation: Hitachi Res. Lab., Ibaraki, Japan
Journal: IEEE Transactions on Plasma Science vol.20, no.2 p.76-9
Publication Date: April 1992 Country of Publication: USA

CODEN: ITPSBD ISSN: 0093-3813
U.S. Copyright Clearance Center Code: 0093-3813/92/$3.00
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: Switching characteristics of sealed-off triggered vacuum gaps (TVGs) were examined from the viewpoint of a high repetition rate at high current discharge. With a triggered energy of 11 J, it was possible to fire the main gap in both the anode and cathode modes of operation. In repetitive discharge experiments, the TVG-tube was put in the **center** of the cylindrical **conductor** and the **switching tube** inductance was about 27 nH. The TVG-tube was confirmed to have capabilities for 1000 shots with a pulse current of 120 kA and a high repetition rate of 5 Hz. These experimental results indicated that the TVG-tube is a potential repetitive closing switch for the **plasma** X-ray **source** . (10 Refs)
Subfile: A B

20/7/9 (Item 9 from file: 2)
DIALOG(R)File 2:INSPEC

04099025 INSPEC Abstract Number: A9207-5280-017, B9204-2340-001
Title: Glow discharge cleaning of vacuum switch tubes
Author(s): Hayashi, T.; Toya, H.
Author Affiliation: Mitsubishi Electr. Corp., Hyogo, Japan
Journal: IEEE Transactions on Plasma Science vol.19, no.5 p.740-2
Publication Date: Oct. 1991 Country of Publication: USA
CODEN: ITPSBD ISSN: 0093-3813
U.S. Copyright Clearance Center Code: 0093-3813/91/1000-0740$01.00
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P); Experimental (X)
Abstract: To clean the surfaces of parts **inside** a vacuum- **switch tube** (VST) the authors propose a technique which **generates** a glow **discharge** between the inner electrodes and the copper grid surrounding it. Photographic observation reveals that the glow discharge spreads out and cleans the whole surface inside the VST. A breakdown test between the inner electrodes shows the effect of the cleaning with this technique. Higher breakdown voltage between the inner electrodes is attained by performing this glow discharge cleaning in argon rather than hydrogen gas. The difference of the cleaning effect seems to be attributed to that of the energy transfer from ion species to the adsorbed molecules and microprotrusions on the surfaces. (5 Refs)
Subfile: A B

20/7/10 (Item 10 from file: 2)
DIALOG(R)File 2:INSPEC

04065659 INSPEC Abstract Number: A9204-7360F-003, B9202-2520F-011
Title: Electronic properties of amorphous and microcrystalline silicon prepared **in a microwave** plasma **from SiF/sub 4/**
Author(s): Hourd, A.C.; Melville, D.L.; Spear, W.E.
Author Affiliation: Carnegie Lab. of Phys., Dundee Univ., UK
Journal: Philosophical Magazine B (Physics of Condensed Matter, Electronic, Optical and Magnetic Properties) vol.64, no.5 p.533-50
Publication Date: Nov. 1991 Country of Publication: UK
CODEN: PMABDJ ISSN: 0141-8637
U.S. Copyright Clearance Center Code: 0141-8637/91/$3.00
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: The authors are concerned with a systematic investigation of electronic, optical and structural properties of hydrogenated Si films prepared by decomposing a mixture of SiF/sub 4/, H/sub 2/ and (initially) Ar in a microwave **plasma** (2.45 GHz). The temperature dependence of the dark conductivity and drift mobility, as well as measurements of photoconductivity, H content, optical absorption and electron diffraction have been used to characterize the specimens. Two related reactor

geometries were studied, the first, system A, included the **coaxial tube** arrangement for gas flow through the cavity also used by Shibata et al. (1987). The electronic quality of the initial material was greatly improved by two modifications: firstly **removal** of the **inner tube** to allow interaction of the SiF/sub 4/ and H/sub 2/ in the cavity and secondly exclusion of the Ar in the mixture to prevent defects from Ar-ion bombardment. With this arrangement, system B, good electronic properties were obtained (eta mu tau approximately=10/sup -5/ cm/sup 2/ V/sup -1/). System B results show a transition to electronically viable microcrystalline Si as the pressure in the reactor is reduced below P=0.20 Torr. Analysis of the Urbach edge parameter E/sub 0/ suggests that the optimized amorphous material, deposited at P=0.25 Torr still contains a small microcrystalline volume fraction. Drift mobility experiments show a decrease in electron mobility and a remarkable increase in the hole mobility, associated with the narrowing of the hole tail states to about 0.09 eV. All experiments so far were carried out at a hydrogen flow rate of 2 s.c.c.m., giving typical values of the H content C/sub H/ of 8-10 at.%. By reducing the flow rate from 2 to 1 s.c.c.m. it is shown that C/sub H/ can be controllably reduced to about 4 at.%, whilst maintaining acceptable electronic properties. The light degradation of photoconductivity has been studied for C/sub H/ between 8 and 4 at.%, showing that the rate of degradation is reduced by decreasing C/sub H/. The results are consistent with a bond-switching mechanism whereby the catalytic action of H stabilizes the broken bonds. (24 Refs)
Subfile: A B

20/7/11 (Item 11 from file: 2)
DIALOG(R)File 2:INSPEC
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00194583 INSPEC Abstract Number: A70074502
Title: On the break-down of gas
Author(s): Sato, Y.
Journal: Bulletin of Tokyo Gakugei University, Series IV (Mathematics and Natural Sciences) vol.22 p.28-31
Publication Date: July 1970 Country of Publication: Japan
CODEN: TGDSBH ISSN: 0371-6813
Language: Japanese Document Type: Journal Paper (JP)
Abstract: The diffusion velocity of mercury plasma in a spherical tube was measured by a probe method when the insulation of the gas was broken down. The discharge tube was about 10 cm in diameter, and two small spherical probes were provided in it. One of them was set to be movable between the anode and cathode, the other being **movable** perpendicularly to the **tube** axis from the **centre** of the **tube** . An intermittent **discharge** was **produced** by a network which consisted of a high resistance and a large capacitance. The lag of the probe current to the break-down of gas was measured with a synchroscope. The values along the axis of the tube were almost equal, but those alone the line which was perpendicular to the axis were proportional to the distance from the centre. From the experiment described above we concluded that the velocity of diffusion of plasma was about 3.5*10/sup 2/m/s and the type of diffusion was presumed to be ambipolar.
Subfile: A

20/7/12 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS
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1915968 NTIS Accession Number: AD-D017 549
Optical Pseudospark Switch
(Patent)
Grothaus, M. G. ; Bernardes, J. S. ; Stoudt, D. C.
Department of the Navy, Washington, DC.
Corp. Source Codes: 001840000; 110050
Report No.: PAT-APPL-8-056 084; PATENT-5 399 941
Filed 3 May 93 patented 21 Mar 95 6p

Languages: English Document Type: Patent
Journal Announcement: GRAI9602
Supersedes PAT-APPL-8-056 084, AD-D015 821.
This Government-owned invention available for U.S. licensing and, possibly, for foreign licensing. Copy of patent available Commissioner of Patents, Washington, DC 20231.
NTIS Prices: Not available NTIS
Country of Publication: United States
This patent discloses a high voltage, high current, multichannel, optically-triggered switch with the potential for improved lifetime of operation. Triggering of the switch is accomplished by ultraviolet illumination of multiple cathode apertures via fiber optic cables. The trigger optics for each channel, being composed of a fiber-optic cable terminated by some collimating optics, are protected from damaging metalization by enclosing them in an angled metal or dielectric tubes in the cathode back-space. The use of collimating optics at the output of the fiber allows the fiber to be recessed **inside** the shield **tube** , providing further protection from **discharge** by- **products** . (MM).

20/7/13 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04603576 E.I. No: EIP97013505220
Title: Evaluation of designs and schemes of shaping the modern electric-weld pipe units
Author: Gulyaev, G.I.; Davydov, F.D.
Corporate Source: Gosudarstvennyj Trubnyj Inst
Source: Stal' n 8 Aug 1996. p 46-48
Publication Year: 1996
CODEN: STALAQ
Language: Russian
Document Type: JA; (Journal Article) Treatment: X; (Experimental)
Journal Announcement: 9703W3
Abstract: Practical importance of the use of more advanced stand and groove designs and shaping schedules in tube electric welding mill is discussed. This provides an improved seam quality along the length of **tubes** and an effective **removal** of **inner tube** bur. Efficiency of cold rolling process for the electric-welded tubes-blanks of alloy steel, **produced** by argon arc-, **plasma** - and laser welding, is increased by using the improved shaping schedules. 8 Refs.

20/7/14 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

01867965 E.I. Monthly No: EIM8505-024576
Title: 1984 IES ANNUAL CONFERENCE PAPERS.
Author: Anon
Conference Title: 1984 IES Annual Conference Papers.
Conference Location: St. Louis, MO, USA Conference Date: 19840805
Sponsor: Illuminating Engineering Soc, New York, NY, USA
E.I. Conference No.: 06300
Source: Journal of the Illuminating Engineering Society v 14 n 1 Oct 1984 560p
Publication Year: 1984
CODEN: JIESBS ISSN: 0099-4480
Language: English
Document Type: CP; (Conference Proceedings)
Journal Announcement: 8505
Abstract: The proceedings comprises 30 papers ranging from computer applications in lighting design to new light source development and roadway lighting. Individual papers deal with the following topics: computer graphics in lighting design, interpolation of intensity distribution, evaluation of the zonal cavity method, illuminance of partitioned spaces, efficiency increase of lamps by infrared reflecting filters, high frequency

operation of low sodium [redacted] fluorescent lamps, electronic [redacted]llasts for fluorescent lamps, ballas[redacted] for miniature metal halide lamp[redacted], the operation of small metal halide lamps, new light **source** using microwave **discharge** , a compact lamp with two **interior** fluorescent **tubes** , a filament **switch** for wattage-saving fluorescent lamps, much HID lamp development, floodlight photometry, lamp/ballast system performace evaluation, high mast lighting impact on roadway illumination, discomfort glare on roadways and in offices, evaluation of visual performance, reactions of visual display operators to indirect lighting.

20/7/15 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04805565 JICST ACCESSION NUMBER: 01A0119257 FILE SEGMENT: JICST-E
Development of an ultrasonic detection type discharge detector.
EMOTO KANJI (1); KISHIDA SHUICHI (2); SHIBATA HIROSHI (2); SUENAGA KIYOYOSHI (2); OKADA SUKETOSHI (2); TOMOSADA YOSHIHITO (3)
(1) Kawasaki Steel Corp.; (2) Kawasaki Steel Corp., Mizushima Work.; (3) Kawatetsu Advantech Co., Ltd.
Kikai Shinko(Promoting Machine Industry in Japan), 2000, VOL.33,NO.12, PAGE.38-41, FIG.7, TBL.1
JOURNAL NUMBER: G0454AAT ISSN NO: 0389-9500
UNIVERSAL DECIMAL CLASSIFICATION: 621.3-78 621.316.17
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication
ABSTRACT: In the case where dielectric breakdown occurs in a **conductor inside** a **switch** board, first, a local partial **discharge** is **generated** , and finally, it leads to a dielectric breakdown accident. "An ultrasonic detection type discharge detector" for detecting a partial discharge in the early stage of insulation degradation was developed. As features, this equipment extracts a discharge sound from field noises, and it has a function to identify that it is a discharge sound. This is equipped with a microprocessor and a digital signal processor, and it identifies a discharge sound by conducting FFT operation for every 0.4 second and is of mobile type. Patent applications related to this development are 3 cases in Japan.

20/7/16 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

03385639 JICST ACCESSION NUMBER: 97A0639959 FILE SEGMENT: JICST-E
Rotary discharge tube.
NAITO HIROHISA (1)
(1) Toshiba Corp.
Toshiba Gijutsu Kokaishu, 1997, VOL.15,NO.40, PAGE.47-48, FIG.2
JOURNAL NUMBER: L0795AAY ISSN NO: 0288-2701
UNIVERSAL DECIMAL CLASSIFICATION: 621.385/.387
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication
ABSTRACT: When a gas-sealed discharge tube of quartz was **made discharge** electricity by microwave irradiation, the placement of the **tube** was **adjusted** timely by manual operation until now so that inner-wall etching of quartz tube would not be maldistributed. This time, a rotation style adjustment by holding the discharge **tube** in free-**rotatable** state was employed. The lifetime of the tube became longer because of uniform etching of the **tube inner** -wall.

20/7/17 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

13167587 PASCAL No.: 97-0429389

Heating and low-frequency modulation of electrons observed during electron beam operations on TSS 1

COUGH M P; HARDY D A; BURKE W J; OBERHARDT M R; GENTILE L C; HUANG C Y; COOKE D L; RAITT W J; THOMPSON D C; MCNEIL W; BOUNAR K

Space Science Centre, University of Sussex, Brighton, United Kingdom; Phillips Laboratory, Hanscom Air Force Base, Massachusetts, United States; Amptek, Inc., Bedford, Massachusetts, United States; Boston College Institute for Scientific Research, Chestnut Hill, Massachusetts, United States; Center for Atmospheric and Space Science, Utah State University, Logan, United States; Radex Inc., Bedford, Massachusetts, United States

Journal: Journal of geophysical research, 1997, 102 (A8) 17335-17357
ISSN: 0148-0227 Availability: INIST-3144; 354000068048360120
No. of Refs.: 32 ref.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: United States
Language: English

We have studied electron responses measured by two electrostatic analyzers (ESA A and B) that comprise the Shuttle Potential and Return Electron Experiment (SPREE) to 60 prolonged beam emissions by the fast pulsed electron generator (FPEG) during the first flight of the Tethered Satellite System (TSS 1). When the beam cleanly escaped into space, responses depended on whether the pitch angle of the beam, alpha SUB B , was less than or greater than 90 Degree . Beam-like structures were detected by SPREE when alpha SUB B < 90 Degree , but not when alpha SUB B > 90 Degree . Secondary electron fluxes measured by SPREE peaked at pitch angles alpha between 65 Degree and 75 Degree when alpha SUB B < 90 Degree , and at alpha similar = 90 Degree when alpha SUB B > 90 Degree . At other pitch angles the distributions of electrons returning to the shuttle had repeatable thermal and power law shapes. The distinctive distribution functions are attributed qualitatively to the different regions in and near the beam traversed by electrons reaching SPREE under the two alpha SUB B conditions. A large fraction of the trajectories of electrons reaching SPREE ESA A with alpha SUB B < (>)90 Degree lie **inside** (outside) beam flux **tubes** . Measurements by a particle correlator in the SPREE data processor show that in 25 cases some of the returning-electron distributions f SUB e were modulated at frequencies in the low kilohertz range. The modulations appeared in portions of the distributions where partial SUB f SUB e / partial SUB upsilon < 0 and at frequencies that correspond to none of the plasma's normal modes. In light of previously reported wave measurements taken near the shuttle during electron beam emissions, we suggest that the modulated electrons were bunched by large-amplitude, ion acoustic waves propagating nearly perpendicular to the Earth's magnetic field. The waves were **generated** as **plasma** responses to negative space charges in the electron-beam flux **tubes** **moving** at orbital speed across the ionosphere.

File 98:General Sci Abs/Full-Text 1984-2002/Sep
(c) 2002 The HW Wilson Co.
File 369:New Scientist 1994-2002/Sep W5
(c) 2002 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS

Set	Items	Description
S1	17513	DISCHARG???? ? OR PLASMA
S2	815	S1(3N)(GENERAT? OR SOURCE? ? OR PRODUC?????? ? OR PROD? ? OR CREAT???? ?)
S3	533	S1(3N)(FORM?? ? OR FORMING? ? OR FORMAT???? ? OR MAKE? ? OR MADE? ? OR MAKING? ? OR SYNTHESI? OR PREPAR?????? ? OR PREP? ? OR PRPN?)
S4	8242	TUBE? ? OR COND OR CONDUCTER? ? OR CONDUCTOR? ?
S5	318	S4(3N)(INNER? OR INSIDE? OR CENTRAL? OR CENTER? OR CENTRE? OR INTERIOR? OR INTERNAL? OR INMOST? OR MIDDLE?)
S6	102	S4(3N)(DISPLAC? OR MOVAB? OR MOVE? ? OR MOVING OR SHIFT???? ? OR SLID??? ? OR MOBIL?????? ? OR REPOSITION? OR RE()POSITION???? ? OR REARRANG?)
S7	224	S4(3N)(RE()ARRANG?????? ? OR ADJUST? OR REPLAC? OR ROTAT??-???? ? OR REMOV? OR INTERCHANG? OR EXCHANG? OR SWITCH? OR INTER()CHANG?)
S8	54	S4(3N)(WITHDRAW? OR 'WITH'()DRAW???? ? OR EXTRACT???? ?)
S9	115	(CO()AXIAL? OR COAXIAL? OR MULTIPLE? ? OR TWO OR PAIR?? ? OR MANY OR MULTI OR SEVERAL OR NUMEROUS OR PLURAL? OR NUMBER)-(1W)S4
S10	25	(SECOND OR DOUBLE OR DUAL OR TWIN)(1W)S4
S11	4	S2:S3(S)S5
S12	1	S2:S3(S)S6:S8
S13	1	S11(S)S12

?t13/3,k/all

13/3,K/1 (Item 1 from file: 370)
DIALOG(R)File 370:Science

00500945 (USE 9 FOR FULLTEXT)
Large-Scale Synthesis of Aligned Carbon Nanotubes
Li, W. Z.; Xie, S. S.; Qian, L. X.; Chang, B. H.; Zou, B. S.; Zhou, W. Y.; Zhao, R. A.; Wang, G.
W. Z. Li, S. S. Xie, B. H. Chang, B. S. Zou, W. Y. Zhou, R. A. Zhao, G. Wang, Institute of Physics, Chinese Academy of Sciences, Beijing 100080, China. ; L. X. Qian, Department of Physics, Central University of Nationalities, Beijing 100081, China.
Science Vol. 274 5293 pp. 1701
Publication Date: 12-06-1996 (961206) Publication Year: 1996
Document Type: Journal ISSN: 0036-8075
Language: English
Section Heading: Reports
Word Count: 2196

(THIS IS THE FULLTEXT)

...Text: about their properties and potential applications (B2) . Large quantities of carbon nanotubes can now be **produced** by either arc **discharge** (B3) (B4) or thermal deposition of hydrocarbons (B5) (B6) . However, experimental characterizations and applications of...which might have been pushed up by the growing carbon nanotubes. EDX spectra taken from **central** parts of the **tubes** show only a carbon peak; tubes filled with iron particles in the central parts were...well-aligned and isolated carbon nanotubes of several square millimeters. The substrate has been successfully **removed** to retain aligned **tubes** . EDX spectra taken from the root of the nanotubes demonstrate the presence of carbon alone...

...Several TEM specimens have been examined carefully, but no carbon nanoparticles or iron nanoparticles trapped **inside** the **tubes** were observed, indicating that the carbon nanotube arrays are very pure...

Hassanzadeh 09/625,200

```
     FILE 'HCA' ENTERED AT 13:55:37 ON 31 OCT 2002
L1         33563 S (DISCHARG? OR PLASMA)(3N)(GENERAT? OR SOURCE?)
L2         33350 S (DISCHARG? OR PLASMA)(3N)(PRODUC? OR PROD# OR CREAT?)
L3         50422 S (DISCHARG? OR PLASMA)(3N)(FORM## OR FORMING? OR FORMAT? OR MA
L4        689382 S TUBE# OR COND OR CONDUCTOR?
L5         22302 S L4(3N)(INNER? OR INSIDE? OR CENTRAL? OR CENTER? OR CENTRE? OR
L6          2717 S L4(3N)(DISPLAC? OR MOVAB? OR MOVE# OR MOVING OR SHIFT? OR SLI
L7         17117 S L4(3N)(RE()ARRANG? OR ADJUST? OR REPLAC? OR ROTAT? OR REMOV?
L8           251 S L4(3N)('WITH'()DRAW? OR EXTRACT?)
L9           544 S L1-L3 AND L5
L10          173 S L1-L3 AND L6-L8
L11           36 S L9 AND L10
L12           32 S L11 NOT 2001-2002/PY
L13         4107 S (CO()AXIAL? OR COAXIAL? OR MULTIPLE? OR TWO OR PAIR? OR MANY
L14         2327 S (SECOND OR DOUBLE OR DUAL OR TWIN)(1W)L4
L15            1 S L12 AND L13-L14
L16           32 S L12 NOT LL15
L17           31 S L12 NOT L15

     FILE 'HOME' ENTERED AT 14:15:47 ON 31 OCT 2002

     FILE 'AEROSPACE, CONF' ENTERED AT 14:17:28 ON 31 OCT 2002

=> s l15
   1 FILES SEARCHED...
'PY' IS NOT A VALID FIELD CODE
L18            0 L15

=> s l17
   1 FILES SEARCHED...
'PY' IS NOT A VALID FIELD CODE
L19            0 L17
```

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File 344:Chinese Patents Abs Aug 1985-2002/Oct
         (c) 2002 European Patent Office
File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)
         (c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2002/UD,UM &UP=200270
         (c) 2002  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
File 348:EUROPEAN PATENTS 1978-2002/Oct W03
         (c) 2002 European Patent Office

Set     Items   Description
S1         33   AU='STEINHARDT H'
S2          2   AU='STEINHARDT HEINZ'
S3         28   AU='GSCHWANDTNER A':AU='GSCHWANDTNER ALEXANDER DR PHIL PHY-
               S'
S4         24   AU='MATHUNI J':AU='MATHUNI JOSEPH DR RER NAT DIPL PHYS'
S5          7   S1:S2 AND S3:S4
S6          2   S1:S2 AND S3 AND S4
S7       3687   PLASMA(S)(ELECTROMAGNETIC? OR ELECTRO()MAGNETIC?)
S8          2   S1:S4 AND S7
S9          7   S5:S6 OR S8
?t9/9/1-6

 9/9/1      (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002  Thomson Derwent. All rts. reserv.

013203908     **Image available**
WPI Acc No: 2000-375781/200032
XRAM Acc No: C00-113480
XRPX Acc No: N00-282244
  Apparatus for producing excited and/or ionized particles in plasma has an
  outlet in an inner chamber of the coaxial conductor between an outer and
  inner conductors
Patent Assignee: R3T GMBH (RTHR-N); R3T RAPID REACTIVE RADICALS TECHNOLOGY
  (RTHR-N); R3T GMBH RAPID REACTIVE RADICALS TECHNOL (RTHR-N)
Inventor:  GSCHWANDTNER A ;  MATHUNI J ;  STEINHARDT H
Number of Countries: 023  Number of Patents: 006
Patent Family:
Patent No      Kind   Date     Applicat No     Kind   Date      Week
WO 200024031    A1  20000427  WO 99EP7617      A   19991011  200032  B
DE 19847848     C1  20000511  DE 1047848       A   19981016  200032
EP 1040506      A1  20001004  EP 99947488      A   19991011  200050
                              WO 99EP7617      A   19991011
CN 1290399      A   20010404  CN 99801752      A   19991011  200140
EP 1040506      B1  20020904  EP 99947488      A   19991011  200266
                              WO 99EP7617      A   19991011
DE 59902548     G   20021010  DE 502548        A   19991011  200269
                              EP 99947488      A   19991011
                              WO 99EP7617      A   19991011

Priority Applications (No Type Date): DE 1047848 A 19981016
Patent Details:
Patent No  Kind Lan Pg   Main IPC     Filing Notes
WO 200024031  A1 G  29 H01J-037/32
   Designated States (National): CA CN JP US
   Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
   MC NL PT SE
DE 19847848   C1       H05H-001/46
EP 1040506    A1 G     H01J-037/32   Based on patent WO 200024031
   Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
   LU MC NL PT SE
CN 1290399    A        H01J-037/32
EP 1040506    B1 G     H01J-037/32   Based on patent WO 200024031
   Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
   LU MC NL PT SE
DE 59902548   G        H01J-037/32   Based on patent EP 1040506
```

Abstract (Basic): WO 200024031 A1

NOVELTY - The apparatus has an outlet (17) to the inlet of the process gas in an inner chamber of the coaxial conductor (30) between an outer conductor (18) and an inner conductor (19). The inner chamber forms the plasma zone (20).

DETAILED DESCRIPTION - Apparatus for producing excited and/or ionized particles in a **plasma** from a process gas has a generator (11) for producing an **electromagnetic** wave; a coaxial conductor (30), in which the **electromagnetic** waves are conducted; and a **plasma** zone (20), in which the excited and/or ionized particles are formed by the **electromagnetic** waves.

USE - Used for producing excited and/or ionized particles in a plasma, especially in removal of material on a semiconductor.

DESCRIPTION OF DRAWING(S) - The diagram shows a schematic view of the apparatus.

generator (11)
coaxial conductor (30)
plasma zone (20)
outlet (17)
inner chamber (31)
outer and inner conductors (18,19)
pp; 29 DwgNo 1/4

Title Terms: APPARATUS; PRODUCE; EXCITATION; IONISE; PARTICLE; PLASMA; OUTLET; INNER; CHAMBER; COAXIAL; CONDUCTOR; OUTER; INNER; CONDUCTOR
Derwent Class: L03; U11; V05; X14
International Patent Class (Main): H01J-037/32; H05H-001/46
File Segment: CPI; EPI
Manual Codes (CPI/A-N): L03-H04D
Manual Codes (EPI/S-X): U11-C07A1; U11-C09C; V05-F04A5; V05-F05C1; V05-F08E1; X14-F02

9/9/2 (Item 2 from file: 350)

009466425
WPI Acc No: 1993-159964/199320
XRAM Acc No: C93-070652
XRPX Acc No: N93-122741

Downstream plasma etching with microwave excitation - involves using gas pressure levels, so eliminating local dependence of etching rates for mfg. integrated semiconductor circuits

Patent Assignee: SIEMENS AG (SIEI)
Inventor: **MATHUNI J** ; **STEINHARDT H**
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4132565	A1	19930408	DE 4132565	A	19910930	199320	B
DE 4132565	C2	19941110	DE 4132565	A	19910930	199443	

Priority Applications (No Type Date): DE 4132565 A 19910930
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4132565	A1		3	C23F-004/04	
DE 4132565	C2		3	C23F-004/00	

Abstract (Basic): DE 4132565 A

Isotropic downstream plasma etching with microwave involves use of excitation, the working pressure level of the etching gas in the etching installation.

This pressure level is set to a value within a range below 13 Pa, in particular, within a range spanning roughly from 0.13-4 Pa, enabling etching to take place at local etching rates which are independent of the immediate surroundings (the presence of absence of surfaces covered with lacquer, in particular).

Pref. the working pressure level is set within a range from

1.0-1.5 Pa in particu[redacted] at approximately 1.3 Pa.

USE/ADVANTAGE - Useful in the semiconductor circuit[redacted] industry. Its use eliminates the problem of local dependence of etching rates. Thus it simplifies the mfg process and improves the quality of the circuits produced.

Dwg.0/0

Abstract (Equivalent): DE 4132565 C

In isotropic plasma etching without magnetic field support, in a reaction chamber sepd. from the microwave excitation of the plasma, the working pressure of the etching gases is adjusted to 4.0-0.13 Pa. Etching of a substrate layer takes place at a local rate independent of available free or lacquer-coated art as in the immediate surroundings. Pref. working pressure is 1.3 Pa.

ADVANTAGE - Avoids micro-loading effect.

Dwg.0/0

Title Terms: DOWNSTREAM; PLASMA; ETCH; MICROWAVE; EXCITATION; GAS; PRESSURE ; LEVEL; SO; ELIMINATE; LOCAL; DEPEND; ETCH; RATE; MANUFACTURE; INTEGRATE ; SEMICONDUCTOR; CIRCUIT

Derwent Class: L03; M14; U11; X14

International Patent Class (Main): C23F-004/04

International Patent Class (Additional): H01L-021/306

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L04-C07D; M14-A02

Manual Codes (EPI/S-X): U11-C07A1; U11-C07C2; X14-F02

9/9/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

009466424

WPI Acc No: 1993-159963/199320

XRAM Acc No: C93-070651

XRPX Acc No: N93-122740

Plasma etching with microwave pre-excitation of the etching gas for mfr. of integrated semiconductor circuits - involves using excited, electrically neutral gas particles which are produced by plasma discharge and enter an etching reactor

Patent Assignee: SIEMENS AG (SIEI)

Inventor: **MATHUNI J** ; **STEINHARDT H**

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4132564	A1	19930408	DE 4132564	A	19910930	199320	B
DE 4132564	C2	19941103	DE 4132564	A	19910930	199442	

Priority Applications (No Type Date): DE 4132564 A 19910930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4132564	A1		4	C23F-004/04	
DE 4132564	C2			C23F-004/04	

Abstract (Basic): DE 4132564 A

Plasma etching involves preliminary excitation of the etching gas by means of microwave energy. Excited, electrically neutral particles of the etching gas are produced by means of plasma discharge. These particles enter into an etching reactor where a plasma etching process takes place with the use of high-frequency energy. The power of this energy is set at less than 400 W and, specifically, less than 150 W.

Pref. the working pressure of the etching process is set at less than 13.3 Pa and, in particular, less than 1.3 PA. Such a process is employed for anisotropic etching by means of thin sidewall passivation and, in particular, less than 30 nm thick sidewall passivation. The method is also applicable for anisotropic ion-assisted chemical etching.

USE/ADVANTAGE - Useful in the semiconductor circuit industry. It eliminates loading and microloading effects experienced with known methods employing high working pressure and power levels. It has also

advantages over etching processes employing magnetic fields which may cause excessive ionisation.

Dwg.0/0

Abstract (Equivalent): DE 4132564 C

In a plasma etching process for mfr. of semiconductor circuits, electrically neutral gas particles excited from etching gases by means of a microwave energy-supplied plasma discharge and passed to a spatially separated etching reactor. By coupling high frequency energy, plasma etching is carried out. High frequency power is less than 150 W and working pressure is adjusted to less than 1.3 Pa.

ADVANTAGE - Low power process with effective etching.

Dwg.0/0

Title Terms: PLASMA; ETCH; MICROWAVE; PRE; EXCITATION; ETCH; GAS; MANUFACTURE; INTEGRATE; SEMICONDUCTOR; CIRCUIT; EXCITATION; ELECTRIC; NEUTRAL; GAS; PARTICLE; PRODUCE; PLASMA; DISCHARGE; ENTER; ETCH; REACTOR

Derwent Class: L03; M14; U11; V05; X14

International Patent Class (Main): C23F-004/04

International Patent Class (Additional): C23F-001/02; H01J-037/32; H01L-021/306

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L04-C07D; M14-A02

Manual Codes (EPI/S-X): U11-C07A1; U11-C07C2; U11-C09C; V05-F05C1A; V05-F05E5; V05-F08E1; X14-F02

9/9/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

009441225 **Image available**

WPI Acc No: 1993-134744/199316

XRPX Acc No: N93-102702

Generating excited neutral particles for semiconductor etching and separation - tuning standing wave forming two voltage maxima on opposite sides of plasma discharge tube of quarter wavelength diameter

Patent Assignee: SECON HALBLEITERPRODUKTIONSGERAETE GMBH (SECO-N)

Inventor: **MATHUNI J** ; **STEINHARDT H**

Number of Countries: 019 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9307639	A1	19930415	WO 92EP2268	A	19920930	199316	B
DE 4132558	C	19921203	DE 4132558	A	19910930	199316	
JP 6508718	W	19940929	WO 92EP2268	A	19920930	199443	
			JP 93506602	A	19920930		
US 5489362	A	19960206	WO 92EP2268	A	19920930	199612	
			US 94211472	A	19940829		

Priority Applications (No Type Date): DE 4132558 A 19910930

Cited Patents: 1.Jnl.Ref; DE 2716592; EP 415122; US 4943345; US 5049843

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9307639	A1	G	25	H01J-037/32	
Designated States (National): JP RU UA US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE					
DE 4132558	C		7	H01J-037/32	
JP 6508718	W		1	H05H-001/46	Based on patent WO 9307639
US 5489362	A		7	H01L-021/00	Based on patent WO 9307639

Abstract (Basic): WO 9307639 A

A plasma discharge tube (5), having a dia. corresponding to a quater-wavelength of the standing wave and a waveguide system (2), is tuned to obtain a voltage max of the standing wave on the magnetron side of the plasma discharge tube (5). The reflection of the standing wave by the waveguide system (2) is used to obtain a second voltage max. of opposite phase, on the second side of the plasma discharge tube (5), facing a termination (12) of the waveguide system (2).

A controlled magnetic field is used to obtain a low working

pressure, the optical [redacted]gnetic field strength pref. de[redacted]mined using a pressure measuring device (18).

ADVANTAGE - Allows working pressure of below 1.3 Pa.

Dwg.2/2

Abstract (Equivalent): US 5489362 A

A method for generating excited neutral particles for etching and deposition processes in semiconductor technology using a plasma discharge fed with microwave energy, comprising the steps of:

generating microwave energy with a frequency,

coupling said microwave energy into a waveguide system,

concentrating said microwave energy, as a standing transversal electrical wave, at locations,

for excitation, conducting specific process gases through the waveguide system with a plasma discharge tube aligned in direction of the electrical field of the wave, whereby a plasma is ignited and excited particles are generated,

selecting a plasma discharge tube having a diameter corresponding to a quarter wavelength of standing wave,

dimensioning and tuning the waveguide system such that the standing wave forms a first voltage maximum at one side of the plasma discharge tube and the standing wave is also supplied reflected, so that it forms a second, anti-phase voltage maximum at a second side of the plasma discharge tube that lies opposite the first side and faces toward an end termination of the waveguide system.

Dwg.2/2

Title Terms: GENERATE; EXCITATION; NEUTRAL; PARTICLE; SEMICONDUCTOR; ETCH; SEPARATE; TUNE; STAND; WAVE; FORMING; TWO; VOLTAGE; MAXIMUM; OPPOSED; SIDE; PLASMA; DISCHARGE; TUBE; QUARTER; WAVELENGTH; DIAMETER

Derwent Class: U11; V05; X14

International Patent Class (Main): H01J-037/32; H01L-021/00; H05H-001/46

International Patent Class (Additional): C23C-016/44; H01L-021/205; H01L-021/302

File Segment: EPI

Manual Codes (EPI/S-X): U11-C07A1; U11-C09C; V05-F05C1A; V05-F05C3; V05-F05E1; V05-F08E1; X14-F02

9/9/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

009433400 **Image available**

WPI Acc No: 1993-126914/199316

XRAM Acc No: C93-056405

XRPX Acc No: N93-096834

Plasma-aided deposition of film for integrated semiconductor circuit - using neutral particles, activated by microwave in separate chamber, and non-excited reaction gas, etc.

Patent Assignee: SIEMENS AG (SIEI)

Inventor: BRAUN R; GABRIC Z; **GSCHWANDTNER A** ; HIEBER K; SPINDLER O; **STEINHARDT H** ; TREICHEL H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4132560	C1	19930422	DE 4132560	A	19910930	199316	B
JP 5217922	A	19930827	JP 92285333	A	19920929	199339	

Priority Applications (No Type Date): DE 4132560 A 19910930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4132560	C1		5	C23C-016/50	
JP 5217922	A		5	H01L-021/205	

Abstract (Basic): DE 4132560 C

In the process for plasma-aided deposition of films from the gas phase, with external microwave excitation, reaction gases are activated in a chamber separate from the reactor. Only neutral activated particles are supplied to the reactor, to which non-excited reaction

gases are also suppli[redacted]. The film material is densifie[redacted]uring deposition by coupling 5% max. of the normal high-frequency power required in plate reactors.

ADVANTAGE - Improved stability of deposited films.

Dwg.1/1

Title Terms: PLASMA; AID; DEPOSIT; FILM; INTEGRATE; SEMICONDUCTOR; CIRCUIT; NEUTRAL; PARTICLE; ACTIVATE; MICROWAVE; SEPARATE; CHAMBER; NON; EXCITATION; REACT; GAS

Derwent Class: L03; M13; U11; X14

International Patent Class (Main): C23C-016/50; H01L-021/205

International Patent Class (Additional): H01L-021/314; H01L-021/3205

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L04-C01B; L04-C12; M13-E05

Manual Codes (EPI/S-X): U11-C05C3; X14-F02

9/9/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

009424782

WPI Acc No: 1993-118298/199315

XRAM Acc No: C93-052554

XRPX Acc No: N93-090193

Plasma etching in-situ cleaning process for vacuum deposition chambers - with separate plasma discharge excitation of etch gas and admission of activated etch gas to chamber

Patent Assignee: SIEMENS AG (SIEI)

Inventor: **MATHUNI J** ; RASKE H; SPINDLER O; **STEINHARDT H**

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4132559	A1	19930408	DE 4132559	A	19910930	199315	B
JP 5214531	A	19930824	JP 92285332	A	19920929	199338	

Priority Applications (No Type Date): DE 4132559 A 19910930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4132559	A1		5	C23F-004/00	
JP 5214531	A		5	C23C-016/00	

Abstract (Basic): DE 4132559 A

Cleaning process for vacuum deposition chambers used in semiconductor technology has etch gases intensively excited in a microwave plasma discharge separate from the deposition chamber and the activated, electrically neutral etch gas particles are then admitted to the deposition chamber to etch all surfaces at high rates irrespective of surface position and arrangement.

Pref. a lower plasma, esp. below 50 W, can additionally be applied in the chamber during cleaning, to intensify the etching rate.

USE/ADVANTAGE - The invention provides an improved in-situ cleaning process for vacuum film deposition chambers used in the mfr. of silicon wafer integrated chips

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Title Terms: PLASMA; ETCH; SITU; CLEAN; PROCESS; VACUUM; DEPOSIT; CHAMBER; SEPARATE; PLASMA; DISCHARGE; EXCITATION; ETCH; GAS; ADMISSION; ACTIVATE; ETCH; GAS; CHAMBER

Derwent Class: L03; U11

International Patent Class (Main): C23F-004/00

International Patent Class (Additional): C23C-016/44; H01L-021/302; H01L-021/304

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L04-C07D; L04-C09

Manual Codes (EPI/S-X): U11-C09; U11-C09F

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9/5,K/7 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

01161062

DEVICE FOR PRODUCING EXCITED/IONIZED PARTICLES IN A PLASMA
VORRICHTUNG ZUR ERZEUGUNG ANGEREGTER/IONISIERTER TEILCHEN IN EINEM PLASMA
DISPOSITIF POUR PRODUIRE DES PARTICULES EXCITEES ET/OU IONISEES DANS UN PLASMA

PATENT ASSIGNEE:
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PATENT (CC, No, Kind, Date): EP 1040506 A1 001004 (Basic)
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APPLICATION (CC, No, Date): EP 99947488 991011; WO 99EP7617 991011
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INTERNATIONAL PATENT CLASS: H01J-037/32; H05H-001/46
CITED PATENTS (EP B): EP 432573 A; EP 726593 A; DE 3915477 A; DE 4004560 A; DE 19608949 A
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NOTE:
No A-document published by EPO
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Application:	000621	A1	International application. (Art. 158(1))
Application:	000621	A1	International application entering European phase
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FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200236	502
CLAIMS B	(German)	200236	432
CLAIMS B	(French)	200236	505
SPEC B	(German)	200236	3164
Total word count - document A			0
Total word count - document B			4603
Total word count - documents A + B			4603

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...CLAIMS B1

1. Device to generate excited and/or ionized particles in a **plasma** from a process gas with a generator (11) to generate an **electromagnetic** wave, a coaxial conductor (30) in which the **electromagnetic** wave is guided, and at least one **plasma** zone (20) in which the excited and/or ionized particles are formed by the **electromagnetic** wave, characterized in that an inlet (17) is available for inlet of the

process gas...

...outer conductor (18) and an inner conductor (19), and that the inner chamber forms the **plasma** zone (20).

2. Device according to Claim 1, characterized in that the generator (11) is...

...one of Claim 6 or 7, characterized in that between the generator (11) for the **electromagnetic** wave or the impedance converter (12, 15) and the **plasma** zone (20), there is a transport region (50) in which the **electromagnetic** wave is transported essentially without loss.

9. Device according to Claim 8, characterized in that...